TO STUDY EFFECT OF GUIDED IMAGERY ON THE QUALITY AND SEVERITY OF PAIN ASSOCIATED WITH DRESSING CHANGE AND RESILIENCE IN BURN PATIENTS

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I hereby declare that the dissertation entitled "**TO STUDY EFFECT OF GUIDED IMAGERY ON THE QUALITY AND SEVERITY OF PAIN ASSOCIATED WITH DRESSING CHANGE AND RESILIENCE IN BURN PATIENTS**" submitted towards partial fulfillment of the requirements for the award of **M.PHIL in Clinical Psychology** degree to BFUHS is a compilation of original work carried out by me under the supervision of **Dr. Bholeshwar Prasad Mishra,** Professor & Head, Department of Clinical Psychology, **Dr. Rajinder Mittal,** Professor & Head, Department of Plastic Surgery and **Palak Upadhyay,** Assistant Professor, Department of Clinical Psychology. No part of this thesis has formed the basis for the award of any degree previously.

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DEDICATED TO MY SPIRITUAL MASTER
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MY PARENTS,
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AND
MY BROTHER -DR. SUSHRUT KALRA, MY SISTER-IN-LAW -DR. SANYUKTA KALRA AND MY LITTLE BUNDLE OF JOY- NIVEDITA KALRA.

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Sincerely,
Shruti Kalra

ABBREVIATIONS

ACT- Acceptance and Commitment Therapy

BRS- Brief Resilience Scale

CBT- Cognitive Behaviour Therapy

GI- Guided Imagery

SF-MPQ- Short Form M Pain Questionnaire

SES- Socio Economic Status

VAS- Visual Analog scale

ABSTRACT

Introduction: Severe pain poses a great challenge for people suffering from burn injuries. Guided imagery helps in reducing pain as leads to the creation of a cognitive and emotional state which is helpful in preventing and reducing pain and other sources of distress. Resilience is the ability of a person to adapt to various challenges and difficulties. Guided imagery helps in increasing the resilience of the person.

Aim of Study: 1) To study the effect of guided imagery on the quality and severity of pain associated with dressing change in burn patients.2) To study the effect of guided imagery on resilience in burn patients.3) To study the pre and post effect of guided imagery on the quality and severity of pain associated with dressing change and resilience in burn patients.

Materials and methods: The study was conducted on burn patients admitted in the Burn ICU and Ward And pre and post intervention evaluation will be done using Brief Resilience Scale, Visual Analog Scale (VAS),and short-form McGill Pain Questionnaire (SF-MPQ).

Results: Guided imagery showed positive results on quality and severity of pain associated with dressing change and resilience in burn patients.

Conclusion: Guided imagery showed promising results in decreasing quality and severity of pain associated with dressing change and increasing resilience in burn patients. The pre and post effect of Guided imagery on quality and severity of pain associated with dressing change and resilience in burn patients was more in experimental group than control group.

Keywords: Pain, burn injury pain, Resilience, Psycholgical distress, dressing change, burn patients, burn injury

TABLE OF CONTENTS

S. NO.	TOPIC	PAGES
I	INTRODUCTION	1-15
II	AIMS AND OBJECTIVES	16
III	REVIEW OF LITERATURE	17-29
IV	MATERIALS AND METHODS	30-36
V	OBSERVATIONS AND RESULTS	37-61
VI	DISCUSSION	62-69
VII	LIMITATIONS	70
VIII	SUMMARY AND CONCLUSIONS	71-75
IX	FUTURE DIRECTIONS	76
X	BIBLIOGRAPHY	77-85
	APPENDICES – I - PROFORMA - MASTER CHART	
	APPENDICES – II - APPROVAL LETTER OF THESIS PLAN - THESIS PLAN	

LIST OF TABLES

Table No.	Title	Page No.
1	Distribution of age group in experimental and control group.	37
2	Distribution of sex in experimental and control group.	38
3	Distribution of education in experimental and control group.	39
4	Distribution of occupation in experimental and control group.	40
5	Distribution of address in experimental and control group.	41
6	Distribution of family type in experimental and control group.	42
7	Distribution of diagnosis in experimental and control group.	43
8	Distribution of grade burn in experimental and control group.	44
9	Mean age in experimental and control group.	45
10	Mean burn percentage in experimental and control group.	46
11	Mean pre intervention Mc Gill pain questionnaire sensory, affective and total scores, visual Analog Scale scores and Brief Resilience Scale scores in Experimental and Control Group.	47
12	Mean post intervention Mc Gill pain questionnaire sensory, affective and total scores, visual Analog Scale scores and Brief Resilience Scale scores in Experimental and Control Group.	48
13	Mean pre and post intervention Mc Gill pain questionnaire sensory, affective and total scores, visual Analog Scale scores and Brief Resilience Scale scores in Experimental group.	49

14	Mean pre and post intervention scores on Mc Gill pain questionnaire sensory, affective and total scores, visual Analog Scale scores and Brief Resilience Scale scores in control group.	50
15	Mean scores on Mc Gill pain questionnaire sensory, affective and total scores, visual Analog Scale scores and Brief Resilience Scale scores in Experimental group and control group.	51

LIST OF FIGURES

Table No.	Title	Page No.
1	Distribution of age group in experimental and control group.	37
2	Distribution of sex in experimental and control group.	38
3	Distribution of education in experimental and control group.	39
4	Distribution of occupation in experimental and control group.	40
5	Distribution of address in experimental and control group.	41
6	Distribution of family type in experimental and control group.	42
7	Distribution of diagnosis in experimental and control group.	43
8	Distribution of grade burn in experimental and control group.	44
9	Mean age in experimental and control group.	45
10	Mean burn percentage in experimental and control group.	46
11	Mean pre intervention Mc Gill pain questionnaire sensory, affective and total scores, visual Analog Scale scores and Brief Resilience Scale scores in Experimental and Control Group.	47
12	Mean post intervention Mc Gill pain questionnaire sensory, affective and total scores, visual Analog Scale scores and Brief Resilience Scale scores in Experimental and Control Group.	48
13	Mean pre and post intervention scores on Mc Gill pain questionnaire sensory, affective and total scores, visual Analog Scale scores and Brief Resilience Scale scores in Experimental group.	49
14	Mean pre and post intervention scores on Mc Gill pain	50

	questionnaire sensory, affective and total scores, visual Analog Scale scores and Brief Resilience Scale scores in control group.	
15	Mean scores on Mc Gill pain questionnaire sensory, affective and total scores, visual Analog Scale scores and Brief Resilience Scale scores in Experimental group and control group.	51

INTRODUCTION

BURN INCIDENCE IN INDIA

The annual burn incidence in India is estimated to be around 6-7 million. The high rate is ascribed to the population's illiteracy, poverty, and lack of safety awareness. [1]

Burns account for more than 8 million disability-adjusted life years (DALYs) globally, making them one of the leading causes of disability. Low- and middle-income nations (LMICs) bear a disproportionate amount of the burden of burns. During the holiday season of Diwali, which is observed every year in October or November, a rise in the frequency of burns is seen as a tendency across South Asia.2 Particularly concerning is the fact that India was expected to have experienced over 23,000 fire-related fatalities in 2019, which is roughly 20% of the global fatality rate. Additionally, burns were responsible for 1.5 million DALYs.[2]

CLASSIFICATION OF BURN DAMAGE

Burn injuries are particularly the kind of injuries that are undermined for their physical and psychological effects on the patient’s life. Although the majority of burn injuries are brought on by heat from hot liquids, solids, or fire, the injuries can also be brought on by friction, cold, heat, radiation, chemicals, or electric sources. Although energy transfer results in tissue damage in all burn injuries, distinct causes can be linked to various physiological and pathophysiological reactions. It is essential to know the cause of the injury as it determines the treatment modality and approach to be used. [3]

The way burn damage is classified according to its severity—that is, its depth and size—is crucial in addition to figuring out the source. Burns that touch the epidermis are classified as superficial (first-degree) burns. These burns cause the skin to turn red, but the discomfort is relatively temporary. Second-degree burns (superficial partial-thickness; formerly 2A burns) are painful, weep, need dressing and wound care, and may scar, but they do not need surgery, as some of the pain receptors have been damaged, deep partial-thickness burns (second-degree burns;

formerly known as 2B burns) are less painful, drier, require surgery, and leave scars. Due to damage to the nerve endings, a full-thickness (third-degree) burn penetrates the entire dermis. These burns require protection from infection and, unless they are extremely minor, surgical care. Fourth-degree burns, which commonly result in the loss of the burned area, are injuries to deeper tissues, such as muscle or bone. [3]

THEORIES OF PAIN

The International Association for the Study of Pain (IASP) adopted the current definition of pain in 1986, defining it as "an unpleasant sensory and emotional experience associated with actual or potential tissue damage, or described in terms of tissue damage, or both." [4]

Development of pain theories that focused on understanding the mechanisms that lie underneath pain perception. could be traced back many years. [5]

Pain could be understood through various lenses and the development of the pain perception theories could be traced back to the Specificity Theory which states that each somatosensory modality has its own set of pathways. The Specificity Theory's central assumption is that each modality has a unique receptor and associated sensory fiber (primary afferent) that is sensitive to a single stimulus. [6] Non-noxious mechanical stimuli, for example, are encoded by low-threshold mechano receptors, which are connected with specific primary afferents that project to "mechanoreceptive" second-order neurons in the spinal cord or brainstem (depending on the source of the input). Second-order neurons in the brain project to "higher" mechanoreceptive regions. Similarly, unpleasant stimuli would activate a nociceptor, which would send a pain fibre to higher "pain" centers. These concepts have been developing for millennia but were experimentally verified and converted into a theory by Western European psychologists.[4]

Descartes' description of the pain system explained pain as a brain-based perception and distinguished between the neurological phenomena of sensory transduction (now known as nociception) and the perceptual experience of pain. The description of nerves, which he regarded as hollow tubules that transport both sensory and motor information, was critical to the development of his theory. [4]

Galen revealed that spinal cord sectioning resulted in sensory and motor impairments.[7] Anatomical studies by Vesalius published in 1543 restated and reinforced Galen's results in the spirit of scientific inquiry that reappeared during the Renaissance (Ochs 2004). In response to this, Galen proposed three prerequisites for perception: 1) an organ that can receive the stimulus, 2) a connection from the organ to the brain, and 3) the presence of a processing center that translates the sensation to conscious perception.[8]

Descartes contributed to Galen's paradigm by hypothesizing the existence of a gate between the brain and the tubular structures (the connections), which may be opened by a sensory cue.[9]

A sensory stimulus would "tug" on the tube, causing a gate to open between the tube and the brain. When this gate is opened, "animal spirits" (an expansion of the Greek pneuma1) can travel through these tubes and the muscles, moving them. Although this sensory system was not particular to pain, La Forge's depiction of a foot near a flame (based on Descartes' notion and La Forge's understanding of contemporaneous anatomy) is one of the most renowned figures in neuroscience. Descartes felt that the pattern and rate of firing (tugging intensity) of a fiber supplied appropriate information to the brain about the intensity and quality of the stimulus. Descartes' assumption of a specialized pathway in the somatosensory system is likely an extension of his suggestion that the visual system requires a labelled line (where the image is conveyed and displayed in the brain).

Specificity theory was proposed by Charles Bell in his pioneer paper ‘I*dea of a New Anatomy of the Brain*’ published in 1811 [10] and gave a different viewpoint on how the nervous system is organized. First, he

proposed that the "common sensorium" model of the brain advanced by Descartes, which was the prevailing theory at the time, was incorrect. Instead, he offered anatomical proof for the hypothesis initially advanced by Willis in the 17th century—that the brain constituted a heterogeneous structure [8]. Then he proposed that nerves were collections of diverse neurons with distinct roles, grouping them only for distribution purposes. Thus, Bell discussed motor neurons, so-called "vital" neurons that are wired to the mind rather than the brain, and various sense neurons for various types of stimuli. However, he continued to hold that sensory perception of stimuli (such as vision and nociception) is distinct from experiences that are based on perception, such as sight and pain.
This is the central principle of the Specificity Theory, which holds that there is a dedicated fibre that leads to a dedicated pain pathway to the sensory modality's brain region. As a result, this hypothesis implies the existence of a pain-specific route.

Intensity Theory, often known as the Intensive (or Summation) Theory of Pain, has been proposed numerous times throughout history. First, the theory defines pain as an emotion that arises when a stimulus is stronger than usual. Plato first proposed this idea in the fourth century BCE in his work Timaeus[11]. In Zoonomia, Erasmus Darwin[12] reaffirmed this idea hundreds of years later. Wilhelm Erb, who lived a century after Darwin, proposed that pain, rather than being a stimulus modality in and of itself, occurs in any sensory system when adequate intensity was attained[13] Bernhard Naunyn's experiment served as the foundation for Arthur Goldscheider's advancement of the Intensity Theory in 1859. He proposed the following neurophysiological model to explain the summation effect: Pain may result from repeated subthreshold or suprathreshold hyper intensive stimulation. He went on to say that the extra sensory input would congregate and accumulate in the grey matter of the spinal cord. This hypothesis competed with von Frey's Specificity hypothesis of Pain. However, Sherrington's evolutionary framework for the Specificity hypothesis undermined the hypothesis by postulating the

existence of sensory receptors that are specialized to respond to unpleasant stimuli, for which he coined the word "nociceptor."[4]

According to the pattern theory of pain, J. P. Nafe proposed a "quantitative theory of feeling" (1929) in an attempt to revise notions of somaesthesis (including pain). This idea overlooked discoveries of specialized nerve endings as well as much of the evidence that supported specificity and/or intensive pain theories. According to the hypothesis, any somaesthetic sensation was caused by a specific and specific pattern of neural firing, and the spatial and temporal profile of peripheral nerve firing stored the stimulus kind and strength. [4]

He went on to say that the enhanced sensory information would converge and sum in the grey matter of the spinal cord. This hypothesis competed with von Frey's Specificity hypothesis of Pain. However, the hypothesis was undermined by Sherrington's evolutionary foundation for the Specificity hypothesis, which proposed the existence of sensory receptors that are specialized to respond to unpleasant stimuli, for which he coined the name "nociceptor." [4]

According to the gate control theory Ronald Melzack and Charles Patrick (Pat) Wall proposed the Gate Control Theory of Pain in 1965 (Melzack and Wall 1965), which would revolutionize pain research. The Gate Control Theory acknowledged the experimental evidence that supported the Specificity and Pattern Theories and proposed a model to explain these seemingly contradictory findings. Melzack and Wall (1965) carefully discussed the shortcomings of the Specificity and Pattern Theories—the era's two dominant theories—and attempted to bridge the gap between these theories with a framework based on aspects of each theory that had been corroborated by physiological data in a seminal paper. Melzack and Wall accepted the existence of nociceptors (pain fibres) and touch fibres and hypothesized that these fibres synapse in two directions. Melzack and Wall specifically accepted the existence of nociceptors (pain fibres) and touch fibres and claimed that these fibres synapse in two distinct sections of the dorsal horn of the spinal cord: cells in the substantia gelatinosa and "transmission" cells.

The activity of the large and tiny fibres controls this gating mechanism. Large-fiber activity inhibits (or closes) the gate, whereas small-fiber activity promotes (or opens) the gate. Activity from descending fibers that start in supraspinal areas and project to the dorsal horn could also affect this gate. When nociceptive input surpasses the inhibition induced, it "opens the gate" and activates pathways that lead to the feeling of pain and its associated behaviors.[4] As a result, the Gate Control Theory of Pain provided a neurological basis for the findings that supported and served to reconcile the apparent disparities between the Pattern and Specificity Theories of Pain.

Contemporary and multi-dimensional aspects of pain describe pain as diverse and complicated, comprising sensory-discriminative, affective-motivational, and cognitive-evaluative components, according to Melzack and Casey (1968). Since the Syriac Empire (approximately 200 BCE), ancient writers have discussed the idea of pain as a multifaceted experience. According to The Book of Medicines (Budge 2002), bile, phlegm, cold, and heat are all combined to cause pain. The brain is where these straightforward combinations take place, and according to Syriac medicine, pain is a brain-produced phenomenon (a notion that has stood the test of time and is still valid today).

Therefore, different combinations of these substances altering the type of pain would result in diverse sorts of aches. It is interesting to note that the concepts of bile and phlegm, as well as those of cold and hot, were comprehended in a different philosophical paradigm; these were not the straightforward chemicals we are familiar with today but rather a classification of the universe. For instance, some foods "cool" the body while others "warm" the body. They follow a lengthy heritage of ancient medicine passed down from the Egyptians, who were the first to record medical books (such as The Papyrus Ebers (Bryan 1930), to the Greeks (most notably Hippocrates and Galen), to the Babylonians, these ideas are not unique to the Syrian people.[4]

The IASP's current definition of pain is based on Melzack and Casey's (1968) [14] divisional (multidimensional) concept. Pain is classified into three dimensions: sensory-discriminative (intensity, location, quality, and length), affective-motivational (unpleasantness and subsequent flight response), and cognitive-evaluative (appraisal, cultural values, context, and cognitive state). These three dimensions do not exist in isolation but rather interact with one another. They are, however, partially dissociable: a person's cognitive state can influence one or both of these pain perception dimensions. [15]

PAIN IN BURN INJURIES

Chronic pain is a constant component in patients suffering from burn injuries. Pain related to the dressing change is one of the major hurdles that burn patients have to face during their path of recovery.[16]

Some of the main characteristics of burn pain are that it is long-lasting and that the nociceptive procedures are repetitive which can lead to severe psychological disturbances if the pain management is not efficient and appropriate. Severe pain poses a great challenge for people suffering from burn injuries. Burn injuries patients go through regular nociceptive procedures like regular dressing changes which can lead to severe pain. It not only restricts the mobility of the person but also poses various forms of psychological distress to the patient. Burn care is complicated, and it benefits from a multidisciplinary approach to guarantee the best possible patient results. Poor management of pain can lead to many disadvantages like increased stay in the hospital as well as increased use of opioids for management of pain. [17] Poor control of pain can lead to an extension of hospital stay extended use of opioids, and reduction in quality of life. Severe psychological distress is a prominent complication of burn injuries. [18]

PSYCHIATRIC ASPECTS OF BURN

The pain associated with burn injuries and the ensuing medical care is among the worst that can be imagined. Burn injuries lead to acute pain. They frequently endure severe psychological stress, which further impairs their capacity to cope with burn dressings. This can result in acute stress, suicidal thoughts depression, dysfunctional coping

techniques, or post-traumatic stress disorder up to two years following the initial burn injury. [18] Burn injuries tend to have a biopsychosocial impact on the patient. Burn victims have complex psychological and rehabilitation demands, which are higher for individuals who are socioeconomically vulnerable or at higher risk for psychosocial problems. Early preventive treatments are necessary to lessen the immediate physical and psychological distress caused by burns and to enhance long-term outcomes, such as managing immediate pain, stress, and bereavement. [19]

TREATMENT OF BURN INJURIES

The primary treatment for pain in burn patients is pharmacotherapy consisting of opioids. The cornerstone of burn pain treatment methods is opioid medication.[20] Numerous negative side effects, such as constipation, central sleep apnea, hypogonadism, hyperalgesia, adrenal insufficiency, osteoporosis, and tremors, may be brought on by long-term opioid medication. [21] Gomez et al. showed that doses of fewer than 20 morphine milligram equivalents (MME) per day did not increase morbidity and death, whereas doses of more than 200 MME per day were associated with a threefold increase in morbidity and mortality. [22] Patients who consume more opioids both before and after surgery are more likely to experience difficulty tapering off of them once their postoperative pain has subsided. Sedation and respiratory depression are two adverse consequences of opioid use that may prevent patients from ambulating early and result in suboptimal patient outcomes. Painkillers may also reduce a patient's sense of self-efficacy. [23]

Whereas, nonpharmacological treatments can be a useful addition in the management of pain. Using a multi–modal approach to pain management including pharmacological and complementary therapy enables a patient to take control of his or her pain and recovery. [23]

A non-pharmacological technique for pain reduction and pain coping that is becoming recognized is relaxation. A relaxed state frequently entails tranquillity and emotions of physical and psychological well-being by inducing the relaxation response, which is the opposite of the stress

response, relaxation techniques aim to reduce the activity of the sympathetic nervous system. [24]

GUIDED IMAGERY

The mind is an effective instrument for healing. Through various therapies, imagery (visualization) has long been used to harness the power of the mind. [25] Guided imagery can activate the mind-body connection.[26] One can lessen pain and other condition-related symptoms by imagining scenes in one's mind. The visualization will be more beneficial if it is more detailed. People are taught to use their imaginations to create a form of fantasy that "removes" them from or gives them power over their current circumstances. This can be done by imagining sights, sounds, scents, tastes, or other experiences. [25]

As the number of deaths connected to opioid use continues to climb, Guided imagery is becoming a more and more common pain management choice in the scientific and medical sectors. Guided imagery is a psychological strategy for relaxation that involves imagining pleasurable sights, sounds, smells, tastes, or somatic sensations (touch, motions, or positions) to produce a positive cognitive and emotional state that can help to prevent or lessen the effects of other kinds of distress. [23] Guided imagery is a process of formulating mental imagery involving various senses using the imagination and prior memory of the individual. [16]

GUIDED IMAGERY TYPES:[23]

1. Relaxation imagery is the visualization of peaceful, calming images that help the body and mind unwind. These pictures could be memories or experiences from the past.

2. Visualising a successful outcome for an anxious circumstance, such as surgery or a job interview, is known as mental rehearsal imagery. The person visualizes himself completing each stage of the activity, fully recuperating from surgery, or completing the interview.

3. Imagining one's pain as something you can manage by being able to turn it off is a key component of pain control imagery. To take one's suffering and turn it into something else is one strategy. Another strategy is to visualize the agony fading away as you achieve painlessness.

GUIDED IMAGERY AND PAIN

Guided imagery is becoming an increasingly famous pain management technique in the healthcare community as it is a technique that uses mental imagery of pleasant sights, smells, sounds, tastes, or somatic sensations which leads to the creation of a cognitive and emotional state which helps prevent and reduce pain and other sources of distress. [23]

Guided Imagery is an efficient relaxation strategy to induce both physiological and psychological states of relaxation. It helps to cope with stress and enhance overall well-being. [27]

Relaxation-guided imagery is effective in reducing preoperative stress and postoperative discomfort. Future research should concentrate on creating protocols and researching the eventual lowering of prescribed anaesthetic and painkiller dosages.[28]

Studies have shown that visualization has been effective in reducing pain by formulation of creative focus and enhancing the sense of well-being. Guided mental imagery is excellent at distracting the patient's attention from bothersome stimuli, promoting relaxation, improving mood, and increasing resilience.[29] Guided imagery is a safe, non-invasive method that can help patients with musculoskeletal problems manage their pain, depression, stress, exhaustion, and anxiety while lowering their pharmaceutical use and enhancing their overall wellness and quality of life.[30] Some of the variants of Guided Imagery have proven their benefits in disabling diseases like Multiple sclerosis. Healing light-guided imagery is one such variant that works on a framework that utilizes creative imagination to face and transform negative influences in the mind. By this intervention, white light is evaluated as different colours which in turn simulates positive outcomes and creates new pathways to tackle symptoms and improve quality of life. [31]

The Bonny Method of Guided Imagery and Music was practiced with cancer patients to help them cope with the treatment and help in the expression of emotions like grief and hope. It is an in-depth music psychotherapy that utilizes specially sequenced Western Art music to

elicit imagery and emotional expression. Recipients had significant improvement in self-esteem and insights.[32]

Research has supported the role of guided imagery in the reduction of anxiety and stress levels. Guided imagery techniques have been shown to significantly reduce intraoperative anxiety in patients undergoing abdominal surgery under spinal anaesthesia. [33]

Similarly, a significant decrease in death anxiety was noticed in hospital nurses during COVID-19 after they were trained by professionals in guided imagery. [34]

Guided imagery has been known to be effective in the reduction of the pain associated with the pain associated with dressing changes in burn patients. [16]

RESILIENCE

Resilience is the ability of a person to overcome the life's difficulties. Resilient people are known to be dynamic and flexible in their approach to life. According to Newman, psychological resilience is the ability of a person to adapt to the adversity of life.[29] According to Souri and Hasanirad (2011) It is a critical element in maintaining a prominent level of psychological well-being.[35] Resilience encompasses not only enhancing a person's tolerance and adaptability in dealing with a crisis but also sustaining and boosting mental health.[36]

Psychological Resilience is the ability to cope emotionally or mentally with a crisis or rapidly come to the pre-crisis circumstances.[37] A resilient person uses "mental processes and behaviors in promoting personal assets and protecting themselves from the potential negative effect of the stressors".[38] To understand resilience, the focus needs to be on the qualities of resilient people. People who can maintain their equipoise during challenging times without any long-term implications of the same are considered psychologically resilient. Resilience not only demands overcoming challenging situations in life but also evolving with "competent functioning". Resilience gives a person the ability to recuperate from life's challenges as a more capable and resourceful human being.[39] According to Aron Antonovsky(1979)[40], a response is considered resilient when it is triggered by an event that is considered

comprehensible (predictable), manageable (controllable), and meaningful (explainable).

CYCLE OF RESILIENCY: When a person is faced with adversity their approach could of 3 types:

1. Erupt in rage.
2. Losing the ability to counter stressful situations and becoming numb due to immense experience of negative emotions.
3. Responding with sadness to the change is challenging.

The third approach is the only approach that is considered a resilient approach as it plays a role in building a sense of well-being. It is applied by resilient people as they get upset due to the challenging change which motivates them to modify the method of coping used by them at the time of the difficult change. The first and the second approach to responding to an adverse event brings out the tendency to blame others and victimization of oneself which in turn leads to rigidity to adapt a new way of coping. They tend to react with their instincts rather than respond to the challenging situation. An adaptive response comprises coping with adversity and dealing with challenging situations.[41]

RESILIENCE TYPES BY GENIE JOSEPH [42]:

1. Natural resilience is the kind of tenacity that one is endowed with from birth. One's human character and vitality are these. Natural resilient people like the events of life and are eager to play, learn, and explore. Natural resilience permits one to continue and produce their best work despite being pushed down and diverted from their path.

2. Adaptive resilience develops when a person is compelled to learn and adapt, and Adversity forces us to adapt. One can develop resilience and become stronger as a result of life. Gaining an insight into how to deal with the challenges and difficulties in life helps an individual develop resilience.

3. Restored/learned resilience: Some methods can be used to increase and, as a result, reclaim the inherent resilience one has

possessed since childhood. This could assist with grappling with trauma from the past, the present, and the future with greater health.

RESILIENCE MODELS FOR FERGUS AND ZIMMERMAN,2005 [43]

Compensatory model: It defines a circumstance in which a risk factor and a resilience factor work in opposition to one another. Independent of the impact of the risk factor, the resilience factor directly affects the result. For instance, abstinence or moderate alcohol use is compensatory in that it is independently and directly linked to a lower risk of teen suicide**.**

Protective model: The protective model's assets and resources help to mitigate or limit the effects of a risk on a bad outcome. Protective factors may lessen, but not entirely remove, the impacts of hazards, or they may strengthen the beneficial benefits of another promotional factor in generating an outcome. For instance, abstaining from drugs is linked to decreased alcohol use, which is protective in that it boosts the latter's anti-suicide potential even though it is not directly linked to lower suicide risk.

Challenge model: The association between a risk factor and a consequence is "curvilinear". Low and high amount of risk factors are associated with adverse consequences, although moderate levels are associated with positive results. Teenagers exposed to moderate levels of danger, for instance, who are exposed to risk factors sufficient enough to overcome, yet challenging enough to teach them how to cope.

7 C's OF RESILIENCE BY DR GINSBURG: [44]

1. Competence: The ability to handle difficult conditions skill fully. For one to feel confident in their abilities to handle situations, they must have the capacity to face challenges and the chance to practice using these talents.

2. Confidence: It is defined as belief in one's talents and is based on competence. One gains confidence when one shows their abilities and expertise in practical situations.

Connection: People with strong ties to their family and neighbourhood organizations are more likely to feel safe and like they belong. They are

more inclined to uphold high moral standards and refrain from engaging in other destructive behaviours.

4. Character: For people to perform responsibly, contribute to society, and feel respected, they must have a fundamental moral sense.

5. Contribution: Having a purpose in life may be a powerful motivator. Giving back to the community fosters close relationships with others.

6. Coping: Those who develop effective stress management skills are better equipped to handle adversity and failure.

7. Control: People who understand internal control are problem solvers as opposed to victims of circumstance. When people are aware that they have some degree of influence over how their actions turn out, they are more inclined to believe in their abilities and confidence.

BUILDING RESILIENCE BY AMERICAN PSYCHOLOGICAL ASSOCIATION: [45]

1. Uphold wholesome connections with immediate family, intimate friends, and others, too.
2. Refrain from characterizing tense or urgent situations as intractable issues.
3. Recognize that circumstances cannot be changed.
4. Make achievable goals and strive toward them.
5. In challenging circumstances, act decisively.
6. After experiencing a loss, look for opportunities for self-discovery.
7. Increase your confidence.
8. Keep a long-term perspective and think about the traumatic incident in a bigger setting.
9. Maintain an optimistic outlook, have high expectations, and visualize your goals.
10. Exercise frequently and pay attention to one's wants and feelings to take care of one's body and mind.

GUIDED IMAGERY AND RESILIENCE

When used in conjunction with spiritual guided imagery, music, and progressive muscle relaxation therapy, cancer patients enduring chemotherapy can have improved coping and resilience. [46]

There is a dearth of studies in this domain on how guided imagery can be used as a complementary method to manage the pain associated with dressing change and resilience in burn patients. Although work has been done on this domain, very few researches have been done in the Indian context.

AIMS AND OBJECTIVES

- To study the effect of guided imagery on the quality and severity of pain associated with dressing change in burn patients.
- To study the effect of guided imagery on resilience in burn patients
- To study the pre and post effect of guided imagery on the quality and severity of pain associated with dressing change and resilience in burn patients.

REVIEW OF LITERATURE

A review study was done by Jutla and Heimbach in 2004 [47] to explore several dowry death scenarios, look into various predispositions, describe the law at the moment, and suggest solutions. Numerous young ladies are burned to death or suffer deadly burns every year in nations like India. They are dowry death victims. To make the husband available for remarriage or to punish the bride and her family, the husband and/or in-laws decide that the dowry—a gift provided to the husband by the daughter's parents—is insufficient. As a result, they attempt to murder the new bride. Unfortunately, this is a domestic issue that is frequently downplayed or neglected, and the criminal justice system frequently falls short.

A retrospective study was conducted by Kumar et al. in 2015 [48] to determine the physical and social causes of burns and to compare the sociodemographic traits of homicide and suicide as suicide and homicide rates are rising everywhere, including in India. Annually, suicides and homicides alone claim one million lives. This retrospective study was conducted on 1393 fatal burn cases (2008-2012) that were autopsied at King George's Medical University's mortuary in Lucknow, India. The following information was retrieved: age, gender, family type, marital status, place of occurrence, psychological status, and burn size (TBSA). Out of the total 1369 burn cases, 536 (38.5%) were the result of homicides, while 857 (61.5%) were the result of suicidal acts. Both suicidal and homicidal deaths tended to be more common in women, with the peak age for suicides being 30-39 years old as opposed to 40-49 years old for homicides. At ages under 19 years, suicide victims are approximately identical to homicide victims; nevertheless, at ages beyond 60 years and below 10, homicides are comparatively more common than suicides. In the homicidal group, married victims made up the majority (66.6%). At the site of the burn, there is little difference. The most frequent psychiatric co-morbidities linked to suicide behaviors were depression and anxiety disorders. Patients who attempted suicide had considerably worse burns.

According to a review study done by Bhate-Deosthali and Lingam in 2016 [49] in India, there are an estimated 7 million burn injuries each year, of which 700,000 necessitate hospitalization and 140,000 result in death. The National Burns Programme estimates that 91,000 of these fatalities are female, which is more than maternal mortality. In general, burn injury deaths among women of childbearing age are three times as probable than those among men. The review article explored the literature that is currently available on burn injuries in India which raises important questions about prevalence, causes, and gaps in understanding the gendered factors that contribute to a high proportion of female burn deaths. Numerous concerns have been raised about the classification of burn deaths as accidents, suicides, and homicides as well as the health system's failure to recognize underlying violence as the cause.

A systematic and clinical review was done by Morgan et al. 2017 to evaluate the epidemiology, pathophysiology, and treatment of burn-related pains led to the evaluation of 72 publications for epidemiology and 14 for treatment showing a paucity of literature on burn-related pain, They concluded that there are few clinical trials available to evaluate the efficacy of analgesics in burn patients, and there is a lack of understanding of the biology of burn pain. To find new pharmacological targets and remedies for the efficient management of burn injury pain, more research is required. [50]

PAIN AND BURN PATIENTS

Latenjet and Choinere,1995 in a study done on pain in burn patients mentioned and talked about the characteristics of the pain in burn patients. A major reason for the pain is due to neuropathy, nociception, and primary secondary hyperalgesia. The pain usually is long-lasting and causes psychological disturbances as the pain could exceed the healing time and the nociceptive procedures which calls attention to more efforts by the nurses and the doctors in the pain management.[17]

A study was done by Yildizeli Topcu in 2018 to see the relationship between pain, pain beliefs, and psychological well-being in patients with chronic pain using a convenience sample method gathered Data using a Personal Information Form, The Pain Beliefs Questionnaire, and

Psychological Well-being Scale. Frequency, percentage, mean, standard deviation, and correlation analysis were used for data assessment. It was found that there was a statistically significant correlation between pain severity and organic pain beliefs, a statistically significant negative correlation between frequency and severity of pain and psychological well-being, and a statistically significant relationship between organic pain beliefs and psychological well-being. Based on the results it was concluded that the organic pain beliefs and pain intensity affect the psychological well-being of the patients with chronic pain. [51]

A study was done by Pérez Boluda et al. in 2016 titled “The dynamic experience of pain in burn patients: A phenomenological study”. to comprehend the agony that individuals with severe burns admitted to a burns unit endure. The findings demonstrate the dynamic character of pain in burn patients and how it is related to events that are well-known and expected, with a focus on wound care. Despite improvements in burn treatment, this finding has been noted in other research, and managing pain associated with treating wounds is challenging. [52]

PSYCHIATRIC ASPECTS OF BURN

In a study conducted by Bond MR in 1978 on Psychological and psychiatric aspects of pain, he focused on the significance of pain. In addition to being a sign of tissue damage, pain can also be a way of expressing emotional discomfort to others, controlling others, displaying animosity, or absolving oneself of guilt. It is abundantly obvious from the research that to treat these symptoms successfully, one must have a thorough understanding of mental life and how it relates to pain. [53]

In a study done by Wiechman and Patterson in 2004 on Psychosocial aspects of burn injuries they focused on the psychological challenges and recovery that burn patients must face as there is increased survival of patients with large burns. Most burn centers employ social workers, vocational counselors, and psychologists as part of the multidisciplinary burn team. They also focused on the Physiological recovery of burn patients which can be seen as a continual process divided into three stages—resuscitative or critical, acute, and long-term rehabilitation. The psychological needs of burn patients differ at each stage. Non-

pharmacological approaches to pain control, such as hypnosis and relaxation, can be effective. [54]

In a study done by Königová and Pondelícek in 1987 on psychological aspects of burn, 143 cases were followed up between September 1980 and April 1985 using a variety of psychodiagnostic tests and questionnaires. To convey various behavior levels, they introduced the scoring of four behavioral "clusters" on a five-point scale. Burns are somato psychic illnesses, according to research. There is a connection between people who have more severe burns and the imperative production of the denial mechanism. The disintegration of the body schema and changes to the burned person's self-representation are caused by deformity of a visible area of the body, according to research on the mental health of patients. 'Character neurosis' in bum sufferers is compared to the 'disfigured face syndrome'.[55]

A study was done by Madianos et al. in 2001 titled Psychiatric Disorders in Burn Patients: A Follow-Up Study to see how common psychological and psychiatric issues were among burn survivors. The sample comprised 45 patients with burn injuries admitted to a major burn unit in the greater Athens in 6 months area where personal interviews were conducted by the administration of the Langner scale and the DSM-III-R Structured Clinical Interview and about twelve months later, 30 patients of the baseline sample were reexamined. They found psychological impairment to be 45.5 and 40% at the baseline and follow-up assessments, respectively, and the extent of burns to be associated with psychological impairment. The prevalence of psychiatric disorders (any DSM-III nosological entity) reached 46.6% at both baseline and follow-up examinations whereas Posttraumatic stress disorder was diagnosed in 17.8 and 20.0% of burn survivors at the baseline and the 12-month follow-up assessments, respectively.[56]

In a study done by Alvi et al. (2009) titled Anxiety and Depression in Burn Patients to Determine the Frequency of Anxiety and Depression in Burn Patients. To assess the socio-demographic distribution of patients developing Anxiety and Depression and to determine the effects of burn-related factors on the development of Anxiety and Depression. A Case

series was conducted at the Department of Burn, Pakistan Ordinance Factory Hospital, Wah Cantt. for 12 months commencing from June 2007 and concluding in May 2008. The study population comprised hospitalized patients with 1% to 50%, selected through a nonprobable sampling technique who were assessed for Anxiety and Depression fifteen days after burn injury. The testing protocol comprised of questionnaire having socio-demographic variables and burn-related variables. Beck Depression Inventory and Beck Anxiety Inventory were applied to evaluate Anxiety and Depression in Burn patients. Descriptive statistics like the mean with Standard Deviation were calculated for age. Frequencies along with percentages were calculated for socio-demographic variables. The frequencies and proportions were also calculated for the presence and extent of severity of depression and anxiety in burn patients. Fifty patients were included in the study, thirty patients (60%) were male and 20 (40%) were females. The mean age of participants was 33.64 +/- 19 years. The majority of participants, 38 (76%) had sustained burn injuries up to 25%. The flame was found to be the most common agent of burn injuries affecting 19 (38%) patients. Depression was seen amongst 29 (58%) patients. Thirteen (26 %) patients had mild, 7 (14%) had moderate, and 9 (18%) had severe Depressive symptoms. Anxiety was seen among 41 (82%) patients, thirteen (26%) patients had mild, 11 (22%) had moderate and 17 (34%) had severe Anxiety symptoms. This study highlights the importance of the simultaneous evaluation and management of Anxiety and Depression in burn-injured patients. [57]

Dalal et al. 2010 stated in an article titled Psychiatric Aspects of Burn that the emotional problems experienced by people suffering burn injuries, whose numbers in the hundreds of thousands, have been largely ignored. The emotional needs of patients with burns have long been overshadowed by the emphasis on survival. Patients undergo various stages of adjustment and face emotional challenges that parallel the stage of physical recovery. They also stated that greater levels of acute pain are associated with negative long-term psychological effects such as acute stress disorder, depression, suicidal ideation, and post-

traumatic stress disorder for as long as 2 years after the initial burn injury. [18]

A study was done by Sadeghi-Bazargani et al. in 2011 on Stress disorder and PTSD after burn injuries: a prospective study of predictors of PTSD at Sina Burn Center, Iran to investigate the existence of post-traumatic stress disorder (PTSD) and predictors of PTSD Checklist score initially and 3 months after injury in burns victims admitted to the Sina Burn Center in north-west Iran. This prospective study examined adult patients aged 16–65 years with unintentional burns. The PTSD Checklist was used to screen for PTSD. The mean PTSD score was 23.8 ± 14.7 early in the hospitalization period and increased to 24.2 ± 14.3, 3 months after the burn injury. Twenty percent of victims 2 weeks into treatment had a positive PTSD screening test, and this figure increased to 31.5% after 3 months. The likelihood of developing a positive PTSD screening test increased significantly after 3 months ($P < 0.01$). Using multivariate regression analysis, factors independently predicting PTSD score were found to be age, gender, and percentage of total body surface area burned.[58]

In a study done by Roh et al.[41] (2012) on Association between depression, patient scar assessment, and burn-specific health in hospitalized burn patients to identify the incidence of in-hospital symptoms of depression, compare the level of patient scar assessment, and burn-specific health by depression cutoff point, and identify the relationship between depression and these variables.

Roh et al. (2012) conducted a cross-sectional descriptive study was done by it included burn patients from two inpatient burn centers were divided into two groups based on the cutoff point of the Korean Center for Epidemiologic Studies Depression Scale (Korean CES-D): ≥25 or <25. Patient Scar Assessment Scale and Korean Burn-Specific Health Scale- Brief (BSHS-B-K) were used to identify associations with depression. Incidence of severe, definite depression as assessed by a score of 25 or above on the Korean CES-D was approximately 50% on average at 60.9 days after injury. Burn patients with the Korean CES-D ≥ 25 had significantly higher total mean patient scar assessment scores

(43.34 ± 11.49 vs. 36.84 ± 9.56, t = 3.265, p = .001), and lower burn-specific health subscale scores compared to patients with Korean CES-D < 25. Depression was positively correlated with all subscales of the Patient Scar Assessment, ranging from r = .196 to .335 except for scar color. Depression was significantly correlated with all subscales of the BSHS-B-K, ranging from r = −.320 to −.725 concluding that the incidence of symptoms of depression is relatively high, and depressed burn patients report worse burn scar or sensation and lower levels of burn-specific health. Early, timely recognition and management of depression in these patients are warranted.[59]

Kumar et al. (2015)[48] stated that the most common psychiatric co-morbidities related to suicidal behavior were depression and anxiety disorders. Suicidal patients had much bigger burns than murderous patients.

In the recent article by Van Loey et al. in 2022 depicting role of burn severity and posttraumatic stress with neuropathic pain and itch after burns enrolled 216 patients to undergo Leeds Assessment of Neuropathic Symptoms and Signs (LANSS) Pain Scale for neuropathic pain and Impact of Event Scale-Revised (IES-R) for Posttraumatic stress (PTS) symptoms concluded that PTS symptoms may indicate altered central processing as a possible explanation for increased itch intensity. Future studies may use this information to better understand pathophysiological and pharmacological pathways, which could result in better burn injury therapy and patient quality of life.[60]

GUIDED IMAGERY AND PAIN

In a study done by Kwekkeboom et al. 1998 on 60 students, Imaging ability was proposed as a moderator in the relationship between guided imagery and symptom relief. Two existing measures of image generation, Marks's (1973) Vividness of Visual Imagery Questionnaire and Betts's (1909) shortened Questionnaire Upon Mental Imagery (Sheehan, 1967), and one measure of absorption, Tellegen's Absorption scale (1993; TAS) were completed by 60 graduate students before listening to a guided imagery intervention to relieve anxiety associated

with an upcoming stressful task. Analyses were conducted using data from 30 participants (7 men and 23 women) who reported an increase in anxiety level after learning of the stressful task. Participants were divided into two groups, successful (n = 21) and unsuccessful (n = 9) users of imagery, based on the change in anxiety scores after listening to the guided imagery intervention. Absorption (TAS) scores were significantly higher for persons in the successful group; there were no differences in image generation scores. Findings may help develop a clinically useful instrument to predict the likelihood of success with guided imagery in relieving cancer pain and its distress. [61]

In an article written by Jane Hart in 2008 on Alternative and contemporary therapies, she empathized with the effectiveness of guided imagery for pain management and reducing anxiety and stress. According to the author, it is not sufficient for the elimination of pain altogether and should be used as an adjunctive method. When practiced regularly it can significantly reduce the pain sensation and reduce the need for pain medications.[62]

In a study done by Kwekkeboom et al. (2010) to compile information on mind-body techniques that have been proven successful in treating two or more symptoms of the pain-fatigue-sleep disturbance cancer symptom cluster. Through March 2009, CINAHL, Medline, and PsychInfo databases were used to search the literature. Studies were grouped according to the type of mind-body intervention used (relaxation, imagery/hypnosis, cognitive-behavioural therapy/coping skills training [CBT/CST], meditation, music, and virtual reality), and a preliminary review was done in regards to the effectiveness for pain, fatigue, and sleep disturbance. If at least two of the three symptoms had evidence of efficacy, mind-body therapies were chosen for study. This review summarises 43 research that addressed five different types of mind-body therapies and met the criteria. The results showed that the three cancer-related symptoms of pain, exhaustion, and sleep disturbance have all improved independently following imagery/hypnosis and CBT/CST therapies. The effects of relaxation have improved both pain and sleep disturbance.[63]

In a study done by Lewandowski et al. in 2011 to see the Biological Mechanisms Related to the Effectiveness of Guided Imagery for Chronic Pain one of the major aims was to determine the effect of a guided imagery (GI) intervention over 8 weeks on pain and pain disability in a sample of persons with chronic noncancer pain (CNCP). it was found that GI was effective in reducing pain intensity and pain disability over 8 weeks.[64]

Bedford 2012 mentioned that a new theory of mind–body interaction in healing is proposed based on considerations from the field of perception. It is suggested that the combined effect of visual imagery and mindful meditation on physical healing is simply another example of cross-modal adaptation in perception, much like adaptation to prism-displaced vision. It is argued that psychological interventions produce a conflict between the perceptual modalities of the immune system and vision (or touch), which leads to changes in the immune system to realign the modalities. It is argued that mind–body interactions do not exist because of higher-order cognitive thoughts or beliefs influencing the body, but instead result from ordinary interactions between lower-level perceptual modalities that function to detect when sensory systems have made an error. The theory helps explain why certain illnesses may be more amenable to mind–body interaction, such as autoimmune conditions in which a sensory system (the immune system) has made an error. The perception approach put forth here is that observed physical change to psychological interventions is just another example of perceptual adaptation, much like spatial adaptation to prism-displaced vision.[65]

According to Burhenn et al. (2014), significant evidence exists to support the use of guided imagery in the management of cancer-related pain (acute and chronic), as well as cancer treatment–related anxiety, nausea and vomiting, and depression. [66]

A study was done by Onieva Zafra et al. in 2015 on the effectiveness of guided imagery relaxation on pain and levels of pain and depression in patients diagnosed with fibromyalgia Patients diagnosed with fibromyalgia aged 18 to 70 years (n = 60) were randomly assigned to a guided imagery group (n = 30) or a control group (n = 30). The outcome

measures were scores for pain with the McGill Pain Questionnaire long form (MPQ- LF) and the Visual Analogue Scale (VAS) and depression with the Beck Depression Inventory and the VAS for depression. The effects were examined at baseline, post-intervention (4th week), and at the end of the study (8th week). Treatment efficacy was analyzed by using a t-test for paired samples. Temporal changes in the scores were examined by using a 2-way repeated-measures analysis of variance. It was concluded that Patients diagnosed with fibromyalgia may benefit from this nursing intervention in terms of relieving pain and depression.[67]

Scheffler et al. conducted a study in 2018 to see the effects of non-pharmacological interventions for procedural pain relief in adults undergoing burn wounds compared to standard care alone or an attention control wherein 21 eligible randomized controlled trials were included 660 patients in total. Random impacts meta-analysis uncovered significant positive treatment consequences for pain results in Hedges' g = 0.58, 95% CI [0.33; 0.84]. Heterogeneity of study impacts was significant, I2 = 72%. Impacts were altogether bigger for examinations against treatment to the surprise of no one (TAU), g = 0.69, CI 95% [0.40; 0.98] than for comparisons against attention control groups, g = 0.21 [−0.11; 0.54], p < 0.001. distraction interventions particularly hypnosis showed the greatest effect on pain relief. Therefore, non-pharmacological interventions are effective in pain management and mental distress reduction. [68]

A systematic literature review was done by Jerling and Heyns in 2018 on Exploring Guided Imagery and Music as a well-being intervention. It was found that GIM interventions have a positive effect on the well-being of clients who seek help for various conditions.[69]

A study was done by Parizad et al in 2019 study aimed to determine the effect of guided imagery on anxiety, muscle pain, and vital signs in patients with COVID-19. 110 patients with COVID-19 were recruited and randomly assigned to two control and intervention groups. Data were collected using the Spielberger Anxiety Inventory, the McGill Pain Questionnaire, and the Visual Analogue Scale. The intervention group

received ten training sessions of guided imagery. The results indicated a significant difference in the mean scores of state ($t = -3.829$, $p < .001$), trait anxiety ($t = -2.946$, $p = .004$), pain quality ($t = -4.223$, $p < .001$), pain intensity ($t = -3.068$, $p = .003$), and heart rate, systolic blood pressure, and oxygen saturation ($p < .001$) between the two groups after the intervention. It was concluded that Guided imagery as a cost-effective method of complementary medicine is recommended to manage anxiety and pain in patients with COVID-19.[70]

GUIDED IMAGERY AND BURN PATIENTS

In a study conducted by Negar et al. (2017) to assess the effect of guided imagery on reducing anxiety and pain due to dressing change in burn patients, they selected 40 burn patients non-randomly through a convenience sampling method and divided them randomly into two equal groups of intervention and control. The intervention group received guided imagery treatment in addition to the routine care, while the control group only received the routine care. The data gathered through a demographic form, Beck anxiety inventory, and McGill pain inventory and analysed by descriptive statistics between the two groups in the pre-test showed no significant differences but showed significant differences in the scores of anxiety and pain between the groups in post-test to conclude that guided imagery can reduce the level of anxiety and pain due to dressing change in the burn patient.[71]

Aghakhani et al. 2021 conducted a study to see the effect of guided imagery on the quality and severity of pain and pain-related anxiety associated with dressing change in burn patients was conducted by wherein they saw the pre and post-effect of guided imagery on the pain and pain related anxiety associated with dressing change in burn patients. They saw this effect by taking a sample of 70 patients (using purposive sampling) and dividing them into 2 groups of one experimental and one control (n=35). Each patient was given 4 sessions of guided imagery sessions using headphones for 4 consecutive days, 1 session per day. The results were evaluated using repeated measures ANOVA and independent T-test and the pre and post-intervention results came out to be significant ($p < 0.001$) indicating that guided imagery is effective

in dealing with quality and severity of pain and pain-related anxiety at the time of dressing in burn patients.[16]

RESILIENCE IN BURN PATIENTS

Luthar et al. (2000) define resilience as the ability to adapt positively despite difficult circumstances.[72]

Bowland in 2015 defined resilience as the process of successfully coping with, adjusting to, or managing substantial sources of trauma.[73]

A study was done by Ghanei Gheshlaghet al. in 2017 on the relationship between mental health and resilience in which 16 correlation studies were examined without time limits, and with a sample size of 3157. Overall, a positive correlation was found between resilience and mental health in the national studies (r = 0.48). [36]

RESILIENCE IN BURN PATIENTS

In a descriptive, cross-sectional study by Tehranineshat et al. 2020 regarding the Relationship Among Burned Patients' Resilience and Self-Efficacy and Their Quality of Life demonstrates the favourable relationships between the patients' resilience and self-efficacy, resilience and quality of life, and self-efficacy and quality of life. According to the study's findings, self-efficacy and burn victims' quality of life are substantially more associated with resilience. Additionally, it was discovered that self-efficacy had a bigger impact on this group's quality of life. The resilience and self-efficacy of burn victims showed a statistically significant positive link, which was another study finding.[74]

GUIDED IMAGERY AND RESILIENCE

In a study done by Kemper and Khirallah in 2015, the effects of a 1-hour online elective course on mind-body abilities on resilience, empathy, and mindfulness in health workers were analysed. Methods used were that in a brand-new online mind-body skills training program, they described enrollees between May and November 2014 for the most well-liked 1-hour lessons. The program measured acute changes in mindfulness, resilience, and empathy, and contrasted baseline stress and burnout among participants with normative samples. Results. Dietitians, nurses, doctors, social workers, clinical trainees, and health researchers made

up the 513 enrollees; approximately 1/4 were trainees. The most well-liked modules included: Autogenic Training (n 14 250), Guided Imagery and Hypnosis for Pain, Insomnia, and Changing Habits (n 14 112), Introduction to Mindfulness (n 14 112), Introduction to Stress, Resilience, and the Relaxation Response (n 14 261), and Mindfulness in Daily Life (n 14 102). First, most students met the burnout threshold criterion and had moderate to high-stress levels. Acute gains in stress (P .001), mindfulness (P .001), empathy (P 14.01), and resilience (P .01) were all significantly correlated with completing one-hour programs. The conclusion was that online mind-body skills training targets a variety of overworked health professionals and is linked to rapid gains in resilience, mindfulness, empathy, and stress management.[75]

A study was done by Shahabi et al. in 2020 on cardiovascular patients to study the effect of Acceptance commitment theory and guided imagery on the resilience of cardiovascular patients admitted to the rehabilitation center. The study was quasi-experimental with pretest-post-test and follow-up with the control group. The research sample size was 45. Interventions consisted of 8 sessions of 60 minutes each (ACT group) and 10 sessions of 45 minutes each (GSI group). Data analysis was performed using repeated measurement covariance analysis and Bonferroni test in SPSS V. 22 software. The results showed that acceptance commitment therapy and guided imagery both show an increase in resilience among people but the results of the ACT group were more significant concluding that ACT by focusing on psychological flexibility, is more effective than GSI on Resilience.[29]

Thus, the review shows that burn patients experience substantial psychological distress and severe pain and guided imagery has been proven to be effective in building resilience and reducing pain. Not much research has been done in the field of guided imagery's effect on the quality and severity of pain associated with dressing change in burn patients and resilience and no research was found to be done in the Indian context on the same.

MATERIALS AND METHODS

SOURCE OF DATA

The study was conducted on the number of patients admitted in the burn ICU and burn ward at Dayanand Medical College and Hospital, Ludhiana from 01.12.2022 to 1.08.2023 divided into two groups of intervention and control from 18 to 60 years of age.

SAMPLE COLLECTION- The study was conducted on burn patients (Two groups of intervention and control) admitted to Burn ICU and Burn Ward at Dayanand Medical College and Hospital, Ludhiana from 18 to 60years of age from 01.12.2022 to 1.08.2023.

RESEARCH DESIGN- Pre and post-test experimental design was used to measure the degree of change occurring due to the administration of the treatment. There were two groups of participants. The experimental group was administered a pre-test, intervention, and post-test whereas the control group was only administered a pre and post-test.

SAMPLING TYPE- Systematic sampling was used. The patients who met the inclusion and exclusion criteria were selected and were divided into control and experimental groups on an odd-even basis.

INCLUSION CRITERIA FOR CONTROL GROUP

1. Patients having a second/ third or fourth-grade burn injury.
2. Patients with burn percentages ranging from 20%-70%.
3. Adults from the age group between 18 to 60 years.
4. Patients admitted in Burn ICU or Burn Ward at Dayanand Medical College and Hospital, Ludhiana.
5. Patients willing to give informed consent

EXCLUSION CRITERIA FOR CONTROL GROUP

1. Patients with psychiatric illness.
2. Patients with burn percentages ranging from 0-19% and 71%-100%.
2. Unconscious patients.
3. Patients on ventilator support.
4. Severely burned patient requires prompt resuscitation and definitive surgical management to reduce morbidity and mortality.
6. Patients with hearing impairments.

INCLUSION CRITERIA FOR EXPERIMENTAL GROUP

1. Patients having a second/ third or fourth-grade burn injury.
2. Patients with burn percentages ranging from 20%-70%.
3. Adults from the age group between 18 to 60 years.
4. Patients admitted in Burn ICU or Burn Ward at Dayanand Medical College and Hospital, Ludhiana.
5. Patients willing to give informed consent.

EXCLUSION CRITERIA FOR EXPERIMENTAL GROUP

1. Patients with psychiatric illness.
2. Patients with burn percentages ranging from 0-19% and 71%-100%.
3. Unconscious patients.
4. Patients on ventilator support.
5. Severely burned patient requires prompt resuscitation and definitive surgical management to reduce morbidity and mortality.
6. Patients with hearing impairments

METHODOLOGY

The study was conducted on burn patients from 18 to 60 years of age, with either second, third, or fourth-grade burn with burn percentage ranging from 20%-70% admitted in Burn ICU or Burn ward at Dayanand Medical College, Ludhiana undergoing treatment from 01.12.2022 to 1.08.2023. The patients who met the inclusion and exclusion criteria were selected and were divided into control and experimental groups on an odd-even basis.

All the patients were informed about the aims and objectives of the study and the voluntary nature of the participation. Rapport was formed with the patients. Informed consent was taken from all the patients. They were informed that they had the option to withdraw from the study at any moment. No one was compelled or forced to take part in the study. They were informed that their identities would not be revealed, and confidentiality was discussed. They were informed about their right to ask questions at any point during the research. They were informed about their right to obtain a briefing on the study's findings if they

requested the same. Socio-Demographic Proforma was filled in containing the basic information of the subject. They were evaluated for resilience using the Brief Resilience Scale, and for intensity and quality of pain the Visual Analog Scale (VAS), and the short-form McGill Pain Questionnaire (SF-MPQ) were administered. Then in both groups, the level of pain and resilience was assessed after the dressing change. Each participant underwent four sessions of Guided imagery. One Guided imagery session was conducted one day before the dressing of the patient started. The duration of the guided imagery sessions was 15-20 minutes each. The Guided imagery sessions were delivered via individual therapy settings. After completion of the fourth Guided imagery session, participants were reevaluated for resilience, intensity, and quality of pain.

TOOLS:

Socio-Demographic Proforma

Visual Analog Scale (VAS)

Short-form McGill Pain Questionnaire (SF-MPQ)

Brief Resilience Scale

Socio-demographic proforma includes the name of the patient, age, gender, MRD number, marital status, educational qualification, occupation, background, contact number, family type, education and occupation of the head of the family, family income, socioeconomic status, diagnosis, scores on Short-form McGill Pain Questionnaire (SF-MPQ), Visual Analog scale and Brief resilience scale. Socio-economic status was calculated using the updated Modified Kuppuswamy Socio-economic Status Scale. [76]

Visual Analog Scale (VAS) - A Visual Analogue Scale (VAS) is one of the pain rating scales used for the first time in 1921 by Hayes and Patterson. It is often used in epidemiologic and clinical research to measure the intensity or frequency of various symptoms The simplest VAS is a straight horizontal line of fixed length, usually 100 mm. The ends are defined as the extreme limits of the parameter to be measured (symptom, pain, health) orientated from the left (worst) to the right (best).

In some studies, horizontal scales are orientated from right to left, and many investigators use vertical VAS. Using a ruler, the score is determined by measuring the distance (mm) on the 10-cm line between the “no pain” anchor and the patient’s mark, providing a range of scores from 0–100. A higher score indicates greater pain intensity. Based on the distribution of pain VAS scores in post-surgical patients (knee replacement, hysterectomy, or laparoscopic myomectomy who described their postoperative pain intensity as none, mild, moderate, or severe, the following cut points on the pain VAS have been recommended: no pain (0–4 mm), mild pain (5-44 mm), moderate pain (45–74 mm), and severe pain (75–100 mm). The reliability of the VAS for acute pain measurement as assessed by the ICC appears to be high. Ninety percent of the pain ratings were reproducible within 9 mm. construct validity, in patients with a variety of rheumatic diseases, the pain VAS is highly correlated with a 5-point verbal descriptive scale (“nil,” “mild,” “moderate,” “severe,” and “very severe”) and a numeric rating scale (with response options from “no pain” to “unbearable pain”), with correlations ranging from 0.71–0.78 and 0.62–0.91, respectively). The correlation between vertical and horizontal orientations of the VAS is 0.99. [77,78]

Short-form McGill Pain Questionnaire (SF-MPQ)- The Short-form McGill Pain Questionnaire (SFMPQ) was developed to provide an instrument that could be completed in less time than the MPQ but would still reflect both the sensory and affective dimensions of pain (Melzack 1987). The SFMPQ consists of 15 descriptors from the MPQ. Of the 15 descriptors, 11 are from the sensory section of the MPQ and 4 are from the affective section. Each descriptor is ranked on an intensity scale of 0 = none, 1 = mild, 2 = moderate, and 3 = severe. A VAS and a 0–5 numerical rating scale are also included. Scoring is by adding the rankings for the descriptors although sensory and affective descriptors may be scored separately. "Pain Rating Index - scale value (VAS)"- the assigned rating can also be accepted as the score for the pain descriptor. Number of words chosen (NWC)"- The higher the total score on the MPQ, the more the pain experience for the patient increases. For the internal

consistency reliability, a Cronbach's alpha of r>0.75 has been reported. One can conclude that the SF-MPQ is a highly valid instrument to evaluate pain in patients with and without neuropathic etiology. [79]

Brief Resilience Scale- is a measure of resilience [29]. It consists of six statements for individuals to agree or disagree with. Items 1, 3, and 5 are positively worded, and items 2, 4, and 6 are negatively worded. The BRS is scored by reverse coding items 2, 4, and 6 and finding the mean of the six items. Scores of 1.00 - 2.99 indicate low resilience, 3.00 - 4.30 indicate normal resilience and 4.31 - 5.00 indicate high resilience. The scale has good internal consistency, with Cronbach's alpha ranging from .80–.9. It gave a test-retest reliability (ICC) of .69 for one month in 48 participants from Sample 2 and .62 for three months in 61 participants from Sample 3. It was positively correlated with resilience measures, optimism, and purpose in life, and negatively correlated with pessimism and alexithymia. It was negatively related to perceived stress, anxiety, depression, negative affect, and physical symptoms. [80]

INTERVENTION:

GUIDED IMAGERY

Guided imagery is a component of mind-body training. It is founded on the idea that the connection between the mind and body, can help in the treatment of chronic physical disorders. The same brain regions that are active when a person experiences a real-time event are also active during the imaging process. In this method, the individual develops a mental process in which they are expected to see, hear, feel, or smell what they want to feel at that moment, as well as visualize it in their mind's eye. Additionally, guided imagery uses words, pictures, scenes, sounds, music, and other elements to evoke feelings of strength and serenity. When asked to visualize, participants are instructed to take deep abdominal and diaphragmatic breaths, then relax their muscles and picture scenes like forests, beaches, and sacred locations while taking note of the sounds and smells surrounding them.

Pre-test phase-Introductory session:

Participants were explained the aims and objectives of the study.

Informed consent was taken.

Participants were informed regarding the voluntary nature of the study and the right to withdraw from the study at any given point in time. They were told about the future implications of the study and their right to ask for the results of the study if they wished to. Participants were informed regarding the active nature of the intervention to be used in the study.

Researcher focused on building rapport with the participants

Socio-demographic Proforma was filled

They were further evaluated on the quality and intensity of pain associated with dressing change using the Short-form McGill Pain Questionnaire (SF-MPQ) and Visual Analog Scale. They were evaluated for resilience using the Biref resilience scale.

The following step-by-step guided imagery script was followed during each session: [81]

Relax for a few minutes. Take off your shoes, put on comfortable clothes, close your eyes, and take a few deep breaths. Imagine walking down a staircase. In each step, pay attention to the feeling that makes you more and more relaxed. When you are completely relaxed, visualize a favorite scene... When you feel comfortable in your desired scene, gradually turn your mind to the problem you want to solve. If multiple images come to your mind, choose one of them to consider in the current session. If no image comes to your mind, try turning to another sense... Imagine that your problem will be completely resolved at the end of the session. This creates the initial healing plan inside you. At the end of the session, take a few more deep breaths and imagine yourself climbing an imaginary staircase while gradually becoming aware of the environment, open your eyes stretch your body, smile, and carry on your routine activities.

Post-test Phase

Post the completion of the 4th session, the participants were reevaluated for quality and intensity of pain associated with dressing change and resilience. They were thanked for their active participation in the study. Any doubts that they may have had during the study were cleared. They were informed about their right to obtain the results of the study, should they ask.

STATISTICAL ANALYSIS

Data will be described in terms of range; mean standard deviation (± SD), median, frequencies (number of cases), and relative frequencies (percentages) as appropriate. To determine whether the data is normally distributed, a Kolmogorov-Smirnov test will be used. Comparison of quantitative variables between the study groups will be done using the Student t-test and Mann-Whitney U test for independent samples for parametric and non-parametric data respectively. For comparing categorical data, the Chi-square ($\chi 2$) test will be performed and the Fisher exact test was used when the expected frequency is less than 5. A probability value (p-value) less than 0.05 will be considered statistically significant. All statistical calculations will be done using (Statistical Package for the Social Science) SPSS 21version (SPSS Inc., Chicago, IL, USA) statistical program for Microsoft Windows.

OBSERVATIONS AND RESULTS

Table 1: Distribution of age group in Experimental and control group.

		Experimental group		Control group		Total	Chi-square value	p-value
		No. of cases	%age	No. of cases	%age			
age group	< 30	11	55%	8	40%	19	2.528	0.470
	31-40	5	25%	4	20%	9		
	41-50	1	5%	4	20%	5		
	> 50	3	15%	4	20%	7		
Total		20	100%	20	100%	40		

Figure 1: Distribution of age group in Experimental and control group.

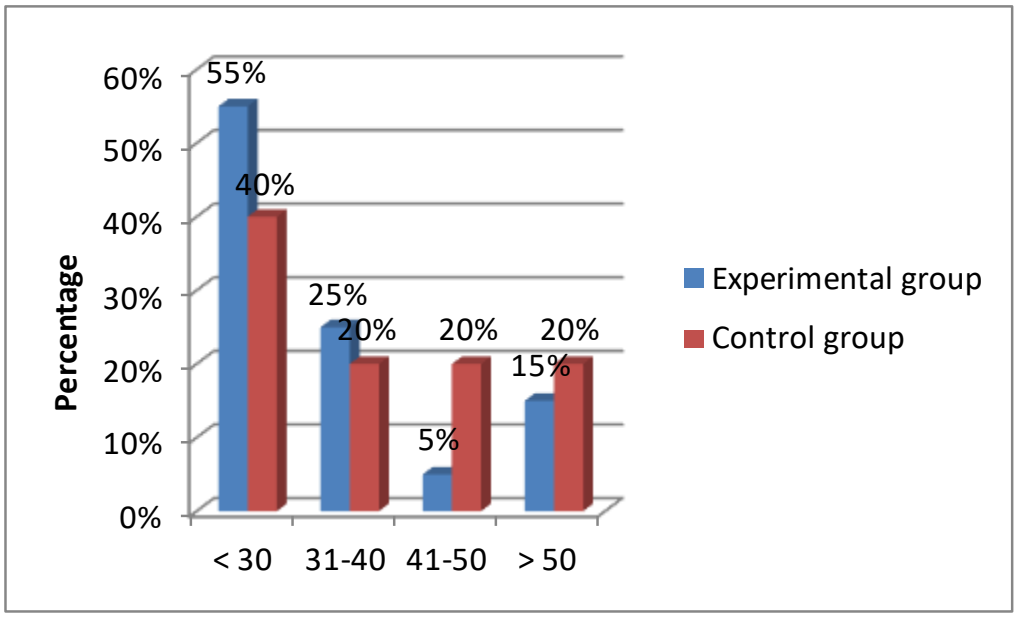


Table 2: Distribution of sex in Experimental and control group.

		Experimental group		Control group		Total	Chi-square value	p-value
		No. of cases	%age	No. of cases	%age			
sex	female	4	20%	1	5%	5	2.057	0.151
	male	16	80%	19	95%	35		
Total		20	100%	20	100%	40		

(NS: Non Non-significant)

Figure 2: Distribution of sex in Experimental and control group.

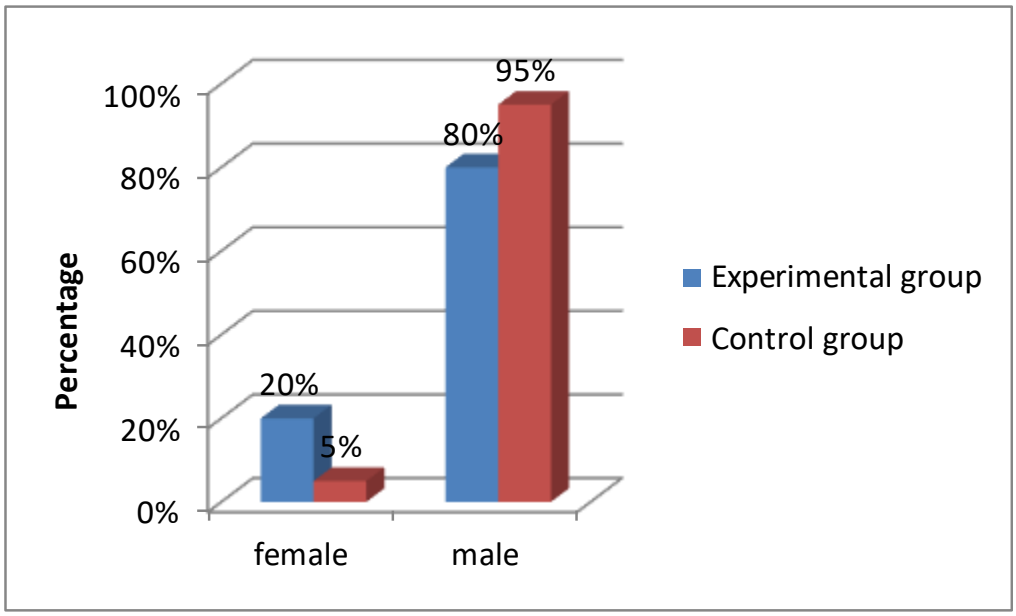


Table 3: Distribution of education in experimental and control group.

		Experimental group		Control group		Total	Chi-square value	p-value
		No. of cases	%age	No. of cases	%age			
education	Illiterate	11	55%	6	30%	17	7.537	0.110
	10th	2	10%	4	20%	6		
	12th	3	15%	7	35%	10		
	Graduate	4	20%	1	5%	5		
	Post Graduate	0	0%	2	10%	2		
Total		20	100%	20	100%	40		

Figure 3: Distribution of education in experimental and control group.

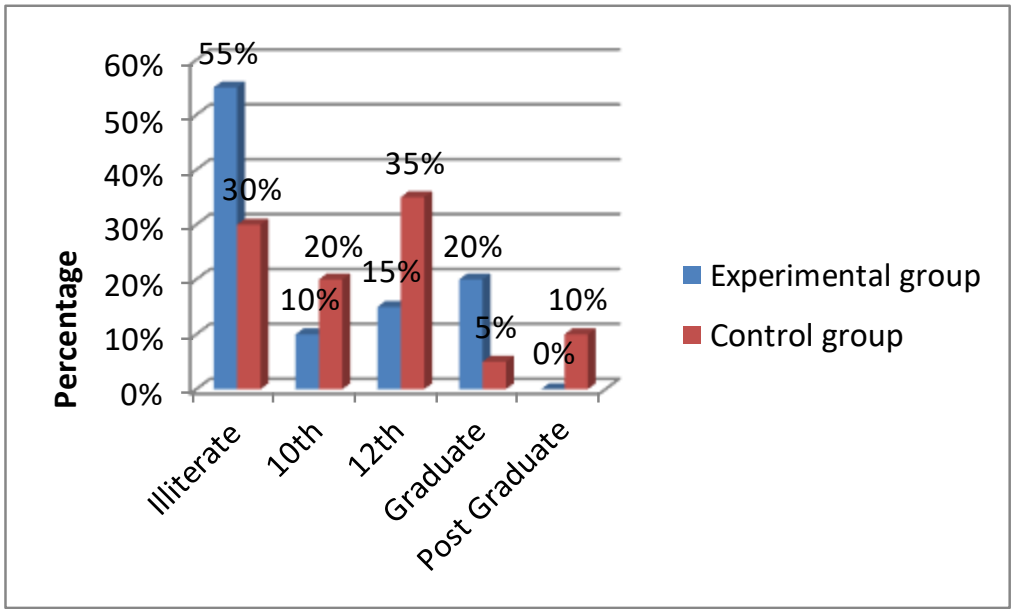


Table 4: Distribution of occupation in Experimental and control group.

		Experimental group		Control group		Total	Chi-square value	p-value
		No. of cases	%age	No. of cases	%age			
occupation	Farmer/ Clerical/ Shopkeeper	6	30%	7	35%	13	3.877	0.423
	Semi-skilled/ skilled worker	12	60%	8	40%	20		
	Unemployed	2	10%	2	10%	9		
	Others	0	0%	2	10%	2		
	Professional	0	0%	1	5%	1		
Total		20	100%	20	100%	40		

(NS: Non-significant)

Figure 4: Distribution of occupation in Experimental and control group.

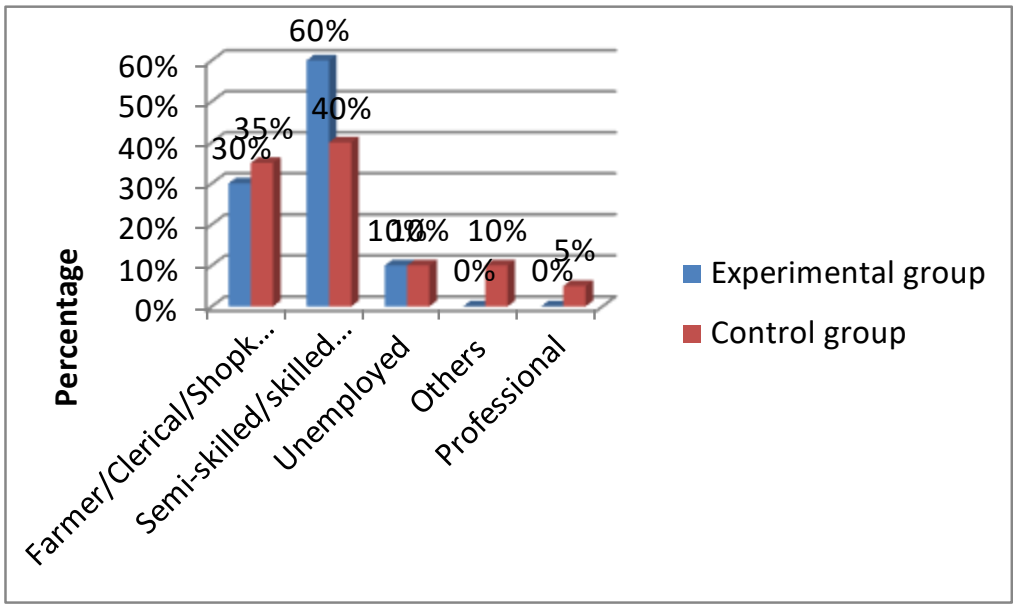


Table 5: Distribution of address in Experimental and control group.

		Experimental group		Control group		Total	Chi-square value	p-value
		No. of cases	%age	No. of cases	%age			
address	Urban	4	20%	8	40%	12	1.905	0.168
	Rural	16	80%	12	60%	28		
Total		20	100%	20	100%	40		

(NS: Non-significant)

Figure 5: Distribution of address in Experimental and control group.

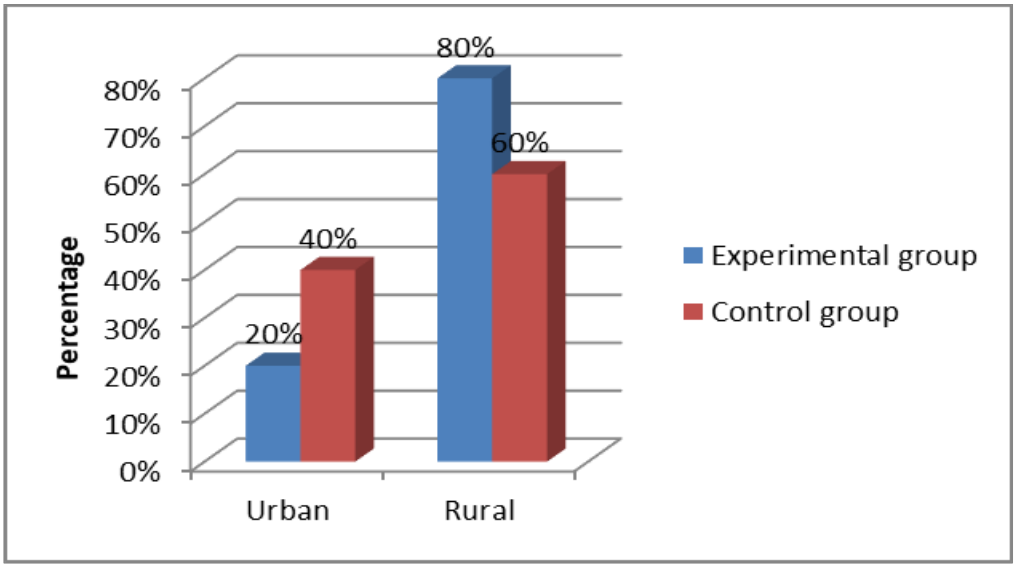


Table 6: Distribution of family type in Experimental and control group.

		Experimental group		Control group		Total	Chi-square value	p-value
		No. of cases	%age	No. of cases	%age			
family type	Nuclear	11	55%	7	35%	18	1.616	0.204
	Joint	9	45%	13	65%	22		
Total		20	100%	20	100%	40		

(NS: Non-significant)

Figure 6: Distribution of family type in Experimental and control group.

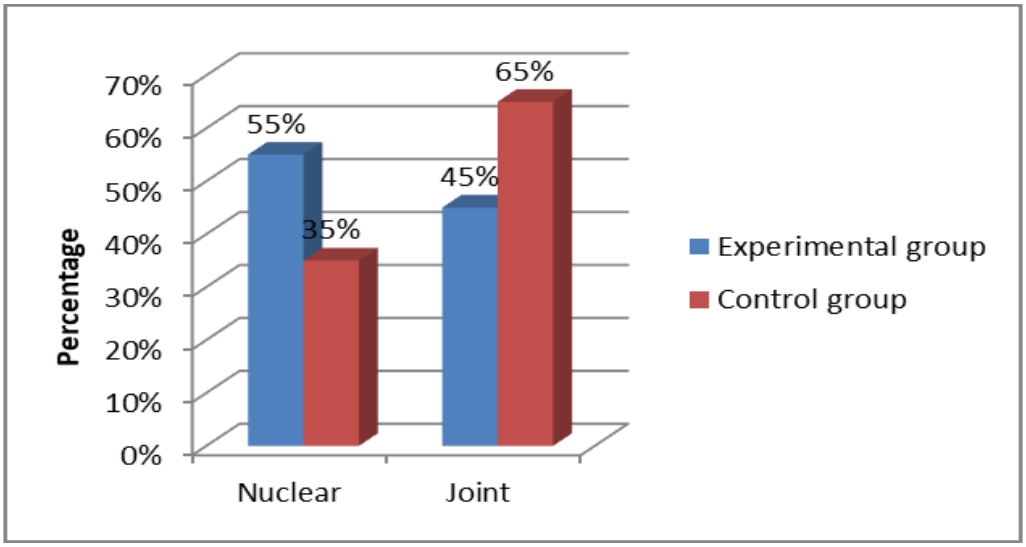


Table 7: Distribution of diagnosis in Experimental and control group.

		Experimental group		Control group		Total	Chi-square value	p-value
		No. of cases	%age	No. of cases	%age			
diagnosis	Chemical burn	1	5%	0	0%	1	5.489	0.359
	electric burn	9	45%	6	30%	15		
	flame burn	7	35%	11	55%	18		
	thermal burn	3	15%	1	5%	4		
	thermal contact burn	0	0%	1	5%	1		
	thermal flame burn	0	0%	1	5%	1		
Total		20	100%	20	100%	40		

(NS: Non-significant)

Figure 7: Distribution of diagnosis in Experimental and control group.

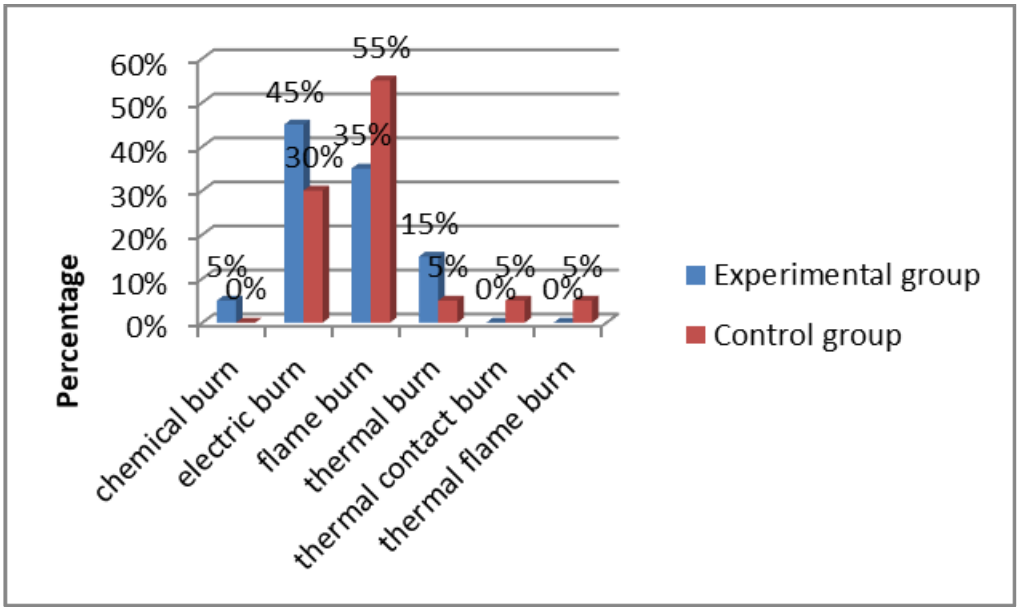


Table 8: Distribution of Grade of Burn in Experimental and control group.

		Experimental group		Control group		Total	Chi-square value	p-value
		No. of cases	%age	No. of cases	%age			
grade of burn	2	8	40%	6	30%	14	0.44	0.507
	3	12	60%	14	70%	26		
Total		20	100%	20	100%	40		

(NS: Non-significant)

Figure 8: Distribution of Grade of Burn in Experimental and control group.

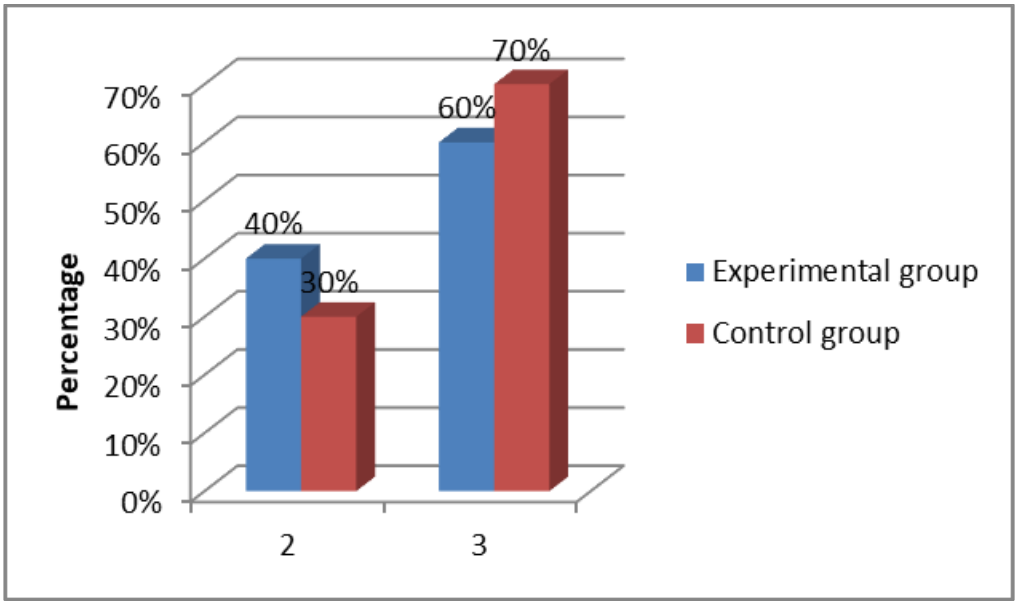


Table 9: Mean age in Experimental and Control Group.

	Experimental group		Control group		t	p-value
	Mean	**SD**	**Mean**	**SD**		
age	33.15	11.43	36.70	12.82	0.924	0.361

(NS: Non-significant)

Figure 9: Mean age in Experimental and Control Group.

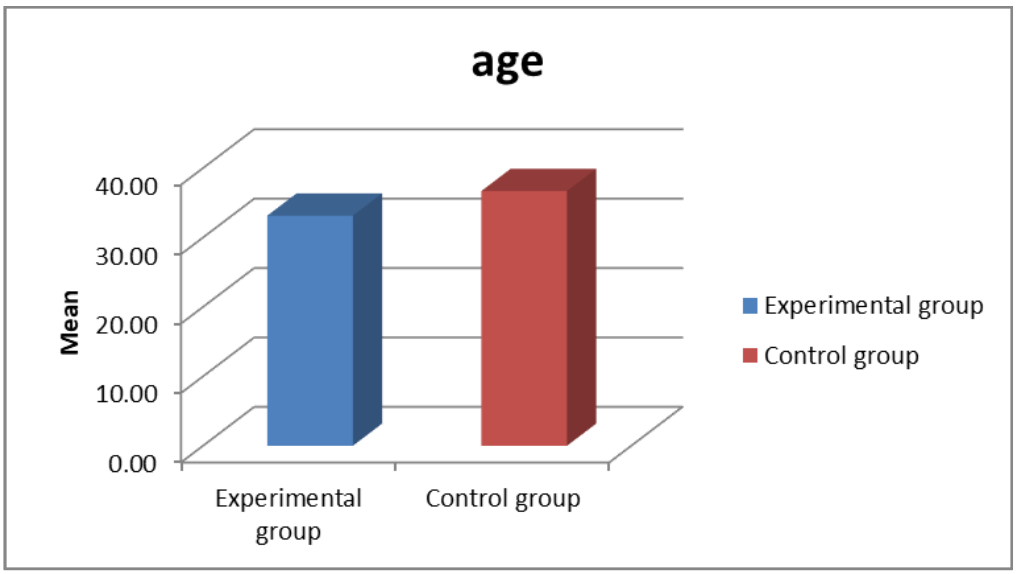


Table 10: Mean Burn percentage in Experimental and Control Group.

	Experimental group		Control group		Z	p-value
	Mean	**SD**	**Mean**	**SD**		
burn percentage	36.50	12.37	40.25	20.49	0.000	1.000

(NS: Non-significant)

Figure 10: Mean Burn percentage in Experimental and Control Group.

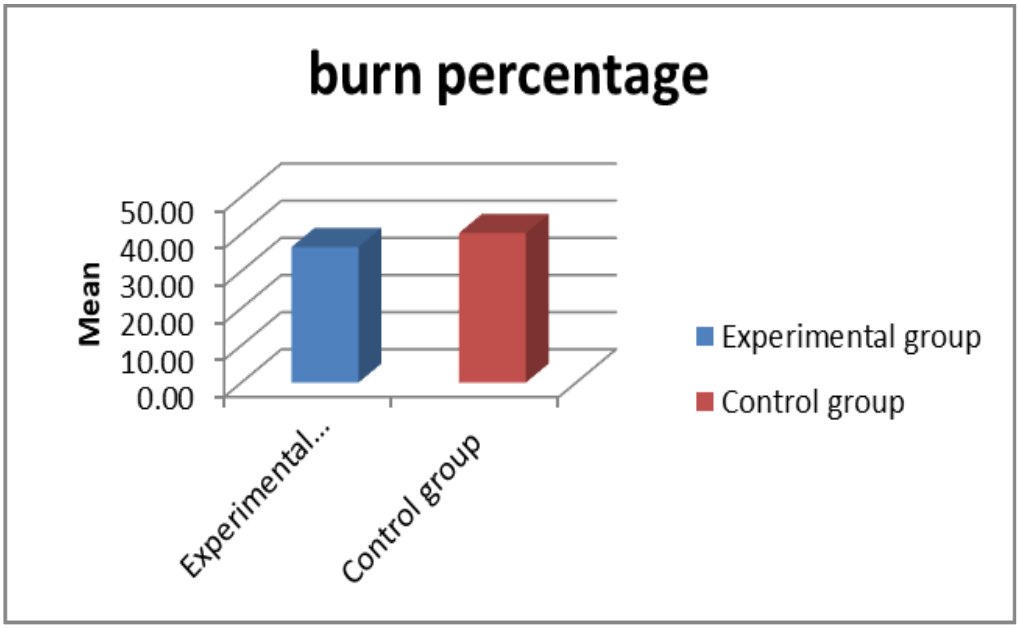


Table 11: Mean pre-intervention Mc Gill pain questionnaire sensory, affective and total scores, visual Analog Scale scores and Brief Resilience Scale scores in Experimental and Control Group.

	Experimental group		Control group		Z	p-value
	Mean	SD	Mean	SD		
mc gill pain questionnaire - pre sensory	16.60	2.09	20.00	6.18	-1.555	0.120
pre affective	6.50	1.40	6.45	2.14	-0.289	0.772
pre total	23.10	2.38	26.45	7.52	-0.628	0.530
pre visual analog scale	5.60	1.82	5.65	1.53	-0.400	0.689
pre brief resilience scale	2.25	0.72	2.91	0.92	-2.486	0.013

Figure 11: Mean pre intervention Mc Gill pain questionnaire sensory, affective and total scores, visual Analog Scale scores and Brief Resilience Scale scores in Experimental and Control Group.

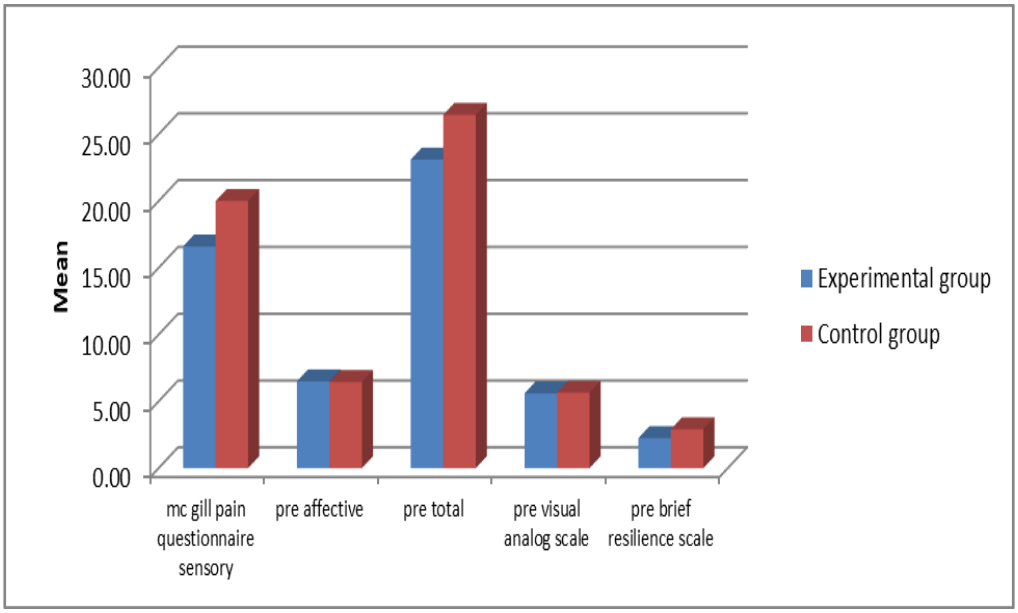


Table 12: Mean post intervention Mc Gill pain questionnaire sensory, affective and total scores, visual Analog Scale scores and Brief Resilience Scale scores in Experimental and Control Group.

	Experimental group		Control group		Z	p-value
	Mean	SD	Mean	SD		
post mc gill pain questionnaire - sensory	12.40	3.35	18.90	6.78	-3.224	0.001
post affective	4.00	2.22	6.25	2.47	-2.657	0.008
post total	16.40	4.89	25.20	8.35	-3.162	0.002
post visual analog scale	3.70	1.63	4.95	1.73	-2.153	0.031
post brief resilience scale	3.61	0.51	2.78	0.91	-2.534	0.011

Figure 12: Mean post intervention Mc Gill pain questionnaire sensory, affective and total scores, visual Analog Scale scores and Brief Resilience Scale scores in Experimental and Control Group.

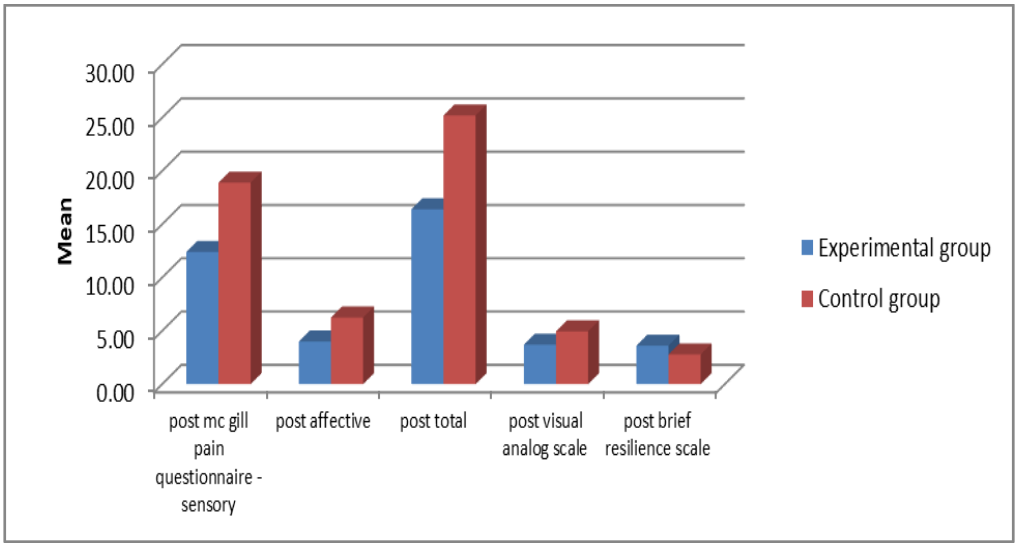


Table 13: Mean pre and post intervention Mc Gill pain questionnaire sensory, affective and total scores, visual Analog Scale scores and Brief Resilience Scale scores in Experimental group.

Experimental group	Pre		Post		Z	p-value	Difference	
	Mean	SD	Mean	SD			Mean	SD
mc gill pain questionnaire - pre sensory	16.60	2.09	12.40	3.35	6.221	0.001	4.20	3.02
pre affective	6.50	1.40	4.00	2.22	4.467	0.001	2.50	2.50
pre total	23.10	2.38	16.40	4.89	6.239	0.001	6.70	4.80
pre visual analog scale	5.60	1.82	3.70	1.63	10.782	0.001	1.90	0.79
pre brief resilience scale	2.25	0.72	3.61	0.51	-8.323	0.001	-1.36	0.73

Figure 13: Mean pre and post intervention scores on Mc Gill pain questionnaire sensory, affective and total scores, visual Analog Scale scores and Brief Resilience Scale scores in Experimental group.

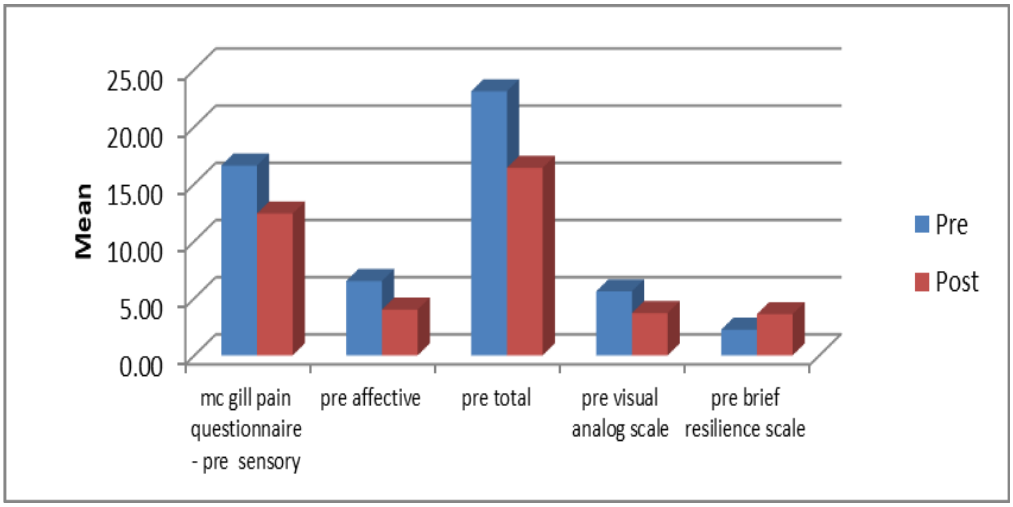


Table 14: Mean pre and post intervention scores on Mc Gill pain questionnaire sensory, affective and total scores, visual Analog Scale scores and Brief Resilience Scale scores in control group.

Control	Pre		Post		Z	p-value	Difference	
	Mean	SD	Mean	SD			Mean	SD
mc gill pain questionnaire - pre sensory	20.00	6.18	18.90	6.78	4.395	0.001	1.10	1.12
pre affective	6.45	2.14	6.25	2.47	1.073	0.297	0.20	0.83
pre total	26.45	7.52	25.20	8.35	3.387	0.003	1.25	1.65
pre visual analog scale	5.65	1.53	4.95	1.73	3.907	0.001	0.70	0.80
pre brief resilience scale	2.91	0.92	2.78	0.91	1.422	0.171	0.13	0.39

Figure 14: Mean pre and post intervention scores on Mc Gill pain questionnaire sensory, affective and total scores, visual Analog Scale scores and Brief Resilience Scale scores in control group.

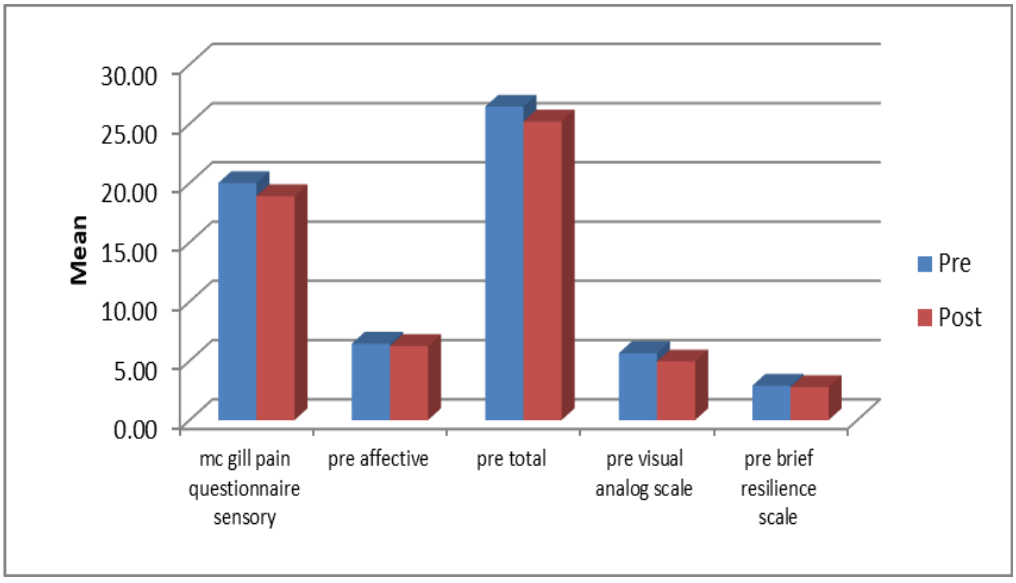
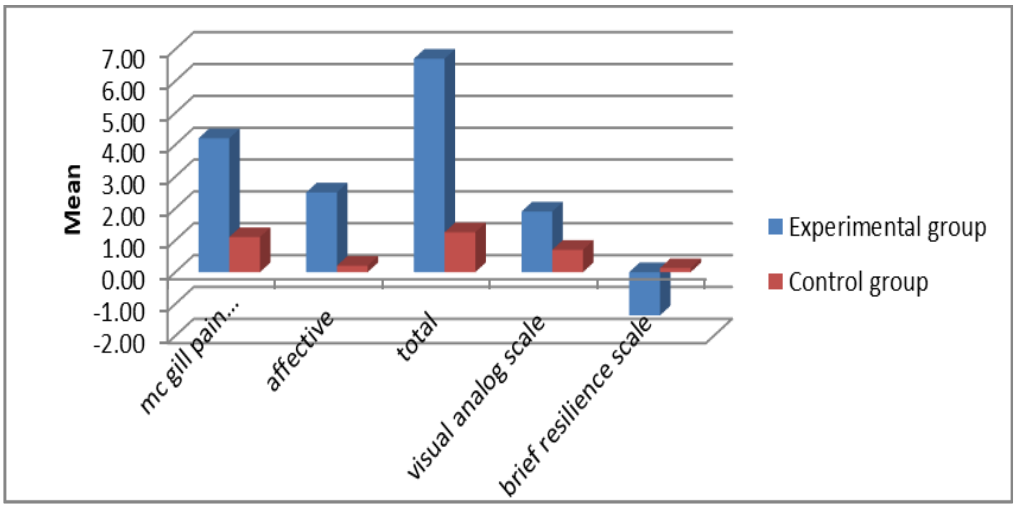


Table 15: Mean scores on Mc Gill pain questionnaire sensory, affective and total scores, visual Analog Scale scores and Brief Resilience Scale scores in Experimental group and control group.

	Experimental group		Control group		Z	p-value
	Mean	SD	Mean	SD		
mc gill pain questionnaire - sensory	4.20	3.02	1.10	1.12	-4.131	0.001
affective	2.50	2.50	0.20	0.83	-3.711	0.001
total	6.70	4.80	1.25	1.65	-3.866	0.001
visual analog scale	1.90	0.79	0.70	0.80	-3.900	0.001
brief resilience scale	-1.36	0.73	0.13	0.39	-5.267	0.001

Figure 15: Mean scores on Mc Gill pain questionnaire sensory, affective and total scores, visual Analog Scale scores and Brief Resilience Scale scores in Experimental group and control group.



The present study was conducted to study the effect of guided imagery on the quality and severity of pain associated with dressing change in burn patients and to study the effect of guided imagery on resilience in burn patients. The study was conducted on burn patients from 18 to 60 years of age, with either second, third, or fourth-grade burn with burn percentage ranging from 20%-70% admitted in Burn ICU or Burn ward at Dayanand Medical College, Ludhiana undergoing treatment from 01.12.2022 to 1.08.2023. The patients who met the inclusion and exclusion criteria were selected and were divided into control and experimental groups on an odd-even basis. They were evaluated for resilience using the Brief Resilience Scale, and for intensity and quality of pain the Visual Analog Scale (VAS), and the short-form McGill Pain Questionnaire (SF-MPQ) were administered. Then in both groups, the level of pain and resilience was assessed after the dressing change. Each participant underwent four sessions of Guided imagery. One Guided imagery session was conducted one day before the dressing of the patient started. The duration of the guided imagery sessions was 15-20 minutes each. The Guided imagery sessions were delivered via individual therapy settings. After completion of the fourth Guided imagery session, participants were reevaluated for resilience, intensity, and quality of pain. The data thus collected was tabulated and then analysed using SPSS.

The following results were obtained:

Table 1 shows the age groups in both the experimental and control groups. Chi-square analysis was done p-value obtained was 0.470 which states that statistically there is no significant difference between the experimental and control group based on age groups indicating homogeneity of groups.

Table 2 shows that there were greater number of males in the control and experimental group, 80 % in the experimental and 95% in the control group. The p- p-value obtained was 0.151 which states that statistically there is no significant difference between the experimental and control

groups based on the sex of the participants indicating homogeneity of groups.

Table 3 shows the education level of the participants of the experimental and control group. 55 % of the total participants were illiterate in the experimental group and 30% of the total participants were illiterate in the control group. 10% of the total participants were educated up to 10th standard in the experimental group and 20% of the total participants were educated up to 10th standard in the control group. 15% of the total participants were educated up to the 12th standard in the experimental group and 35% of the total participants were educated up to the 12th standard in the control group. 20% of the total participants were educated up to graduation level in the experimental group and 5% of the total participants were educated up to graduation level in the control group. 0% of the total participants were educated up to post-graduation level in the experimental group and 10% of the total participants were educated up to post-graduation level in the control group. The value obtained using chi-square statistics was not statistical which means that there was no significant difference between the experimental and control groups based on the education of the participants groups indicating homogeneity of groups.

Table 4 shows the occupation of the participants of the experimental and control group.

In the experimental group, 30% of the participants were farmers/clerical/shopkeepers, whereas in the control group, 35% of the participants were farmers/clerical/ shopkeepers. In the experimental group, 60% of the participants were Semi-skilled/ skilled workers, whereas in the control group, 40% of the participants were Semi-skilled/ skilled workers. In the experimental group, 10% of the participants were unemployed, whereas in the control group, 10% of the participants were unemployed. In the experimental group, none of the participants were from other professions, whereas in the control group, 10% of the participants were from other professions. In the experimental group,

none of the participants were professionals, whereas in the control group, 5% of the participants were professionals. The analysis was done using chi-square and the results were not statistically significant which means there is no statistically significant difference between both the control and experimental group based on occupation of the participants indicating homogeneity of groups.

Table 5 shows the address of the participants of the experimental and control groups. In the experimental group, 20% of the total participants were from urban areas whereas in the control group, 40% of the total participants were from urban areas. In the experimental group, 80% of the total participants were from rural areas whereas in the control group, 40% of the total participants were from rural areas. The analysis was done using chi-square and the results were not statistically significant which means there is no statistically significant difference between the control and experimental group based on the address of the participants indicating homogeneity of groups.

Table 6 shows the family-type participants of the experimental and control group. In the experimental group, 55% of the total participants were from the nuclear family whereas in the control group, 35% of the total participants were from a nuclear family. In the experimental group, 45% of the total participants were from joint families whereas in the control group, 65% of the total participants were from joint families. The analysis was done using chi-square and the results were not statistically significant which means there is no statistically significant difference between both the control and experimental group based on the family type of the participants indicating homogeneity of groups.

Table 7 shows the diagnosis of the participants of the experimental and control group.
In the experimental group, 5% of the total participants had the diagnosis of chemical burn whereas in the control group, none of the participants had the diagnosis of chemical burn.

In the experimental group 45% of the total participants had the diagnosis of electric burn whereas in the control group, 30% of the total participants had the diagnosis of electric burn. In the experimental group 35% of the total participants had the diagnosis of flame burn whereas, in the control group, 55% of the total participants were from the control group. In the experimental group 15% of the total participants had the diagnosis of thermal burn whereas in the control group, 5% of the total participants were from the control group. In the experimental group none of the total participants had the diagnosis of thermal contact burn whereas in the control group, 5% of the total participants were the control group. In the experimental group none of the total participants had the diagnosis of thermal flame burn whereas in the control group, 5% of the total participants were from the control group. The analysis was done using chi-square and the results were not statistically significant which means there is no statistically significant difference between the control and experimental group based on diagnosis of the participants indicating homogeneity of groups.

Table 8 shows the grade of burn of the participants of the experimental and control group. In the experimental group 40% of the total participants had the diagnosis of grade 2 burn whereas in the control group, 30% of the total participants had the diagnosis of grade 2 burn. In the experimental group 60% of the total participants had the diagnosis of grade 3 burn whereas in the control group, 70% of the total participants had the diagnosis of grade 3 burn. In both groups, the number of patients diagnosed with grade 3 burn was more as compared to grade 2 burn. There were no participants for the grade 4 burn. The analysis was done using chi-square and the results were not statistically significant which means there is no statistically significant difference between the control and experimental group based on the grade of burn of the participants indicating homogeneity of groups.

Table 9 shows the mean age in both the experimental and control groups. The mean age of the experimental group was 33.3 with a standard

deviation of 11.43 and of the control group was 36.70 with a standard deviation of 12.82. The age range from which the participants were selected was 18 to 60 years of age. The mean ages of the groups were compared using a t-test and the value obtained was not statistically significant indicating homogeneity of groups.

Table 10 shows the burn percentage of both the experimental and control groups. The mean burn percentage of the experimental group was 36.50 with a standard deviation of 12.37 and of the control group was 40.25 with a standard deviation of 20.49. The percentage range selected for the study was 20%-70%. The mean burn percentage of the groups was compared using a t-test and the value obtained was not statistically significant indicating homogeneity of the group.

Table 11 shows the pre-intervention mean scores on the McGill pain questionnaire, visual analog scale, and Brief resilience scale. In the experimental group, the mean sensory score on the Gill pain questionnaire was 16.60, whereas in the control group, the mean sensory score on the McGill pain questionnaire was 20.00. In the experimental group, the mean affective score on the Gill pain questionnaire was 6.50, whereas, in the control group, the mean affective score on the McGill pain questionnaire was 6.45. In the experimental group the mean total score of the Gill pain questionnaire was 23.10, whereas in the control group, the mean total score on the McGill pain questionnaire was 26.45.

In the experimental group, the mean total score on the Visual Analog scale was 5.60, whereas in the control group the mean total score on the Visual Analog scale was 5.65.
In the experimental group, the mean total score on the Brief Resilience scale was 2.25, whereas in the control group, the mean total score on the Brief Resilience scale was 2.91. The pre-intervention means scores of both the experimental and control group on the brief resilience scale were statistically significant indicating that the resilience of the

participants of both the experimental and control group pre-intervention was high.

Table 12 shows the post-intervention mean scores on the McGill pain questionnaire, visual Analog scale, and Brief resilience scale. Each participant underwent four sessions of Guided imagery. One Guided imagery session was conducted one day before the dressing of the patient started. The duration of the guided imagery sessions was 15-20 minutes each. The Guided imagery sessions were delivered via individual therapy settings. In the experimental group, the mean sensory score on the McGill pain questionnaire was 12.40, whereas in the control group, the mean sensory score on the McGill pain questionnaire was 18.90. In the experimental group, the mean affective score on the Gill pain questionnaire was 4.00, whereas, in the control group, the mean affective score on the McGill pain questionnaire was 6.25. In the experimental group, the mean total score on the McGill pain questionnaire was 16.40, whereas in the control group, the mean total score on the McGill pain questionnaire was 25.20. In the experimental group the mean total score on the Visual Analog scale was 3.70, whereas in the control group, the mean total score on the Visual Analog scale was 4.95. In the experimental group the mean total score on the Brief Resilience scale was 3.61, whereas in the control group, the mean total score on the Brief Resilience scale was 2.78.

Table 13 shows the pre and post-intervention scores using student t-test analysis in the experimental group. The pre-intervention mean sensory score on the mc gill pain questionnaire was 16.60 with a standard deviation of 2.09 and the post-intervention mean sensory score on the mc gill pain questionnaire was 12.40 with a standard deviation of 3.35 with a difference of 4.20 with standard deviation of 3.02 showing statistically significant differences in both the pre and post sensory score on mc gill pain questionnaire.

The pre-intervention mean affective score on the mc gill pain questionnaire was 6.50 with a standard deviation of 1.40 and the post-

intervention mean affective score on the mc gill pain questionnaire was 4.00 with a standard deviation of 2.22 with a mean difference of 2.50 with standard deviation of 2.50 showing statistically significant differences in both the pre and post affective score on mc gill pain questionnaire. The pre-intervention mean total score on the mc gill pain questionnaire was 23.10 with a standard deviation of 2.38 and the post-intervention mean total score on the mc gill pain questionnaire was 16.40 with a standard deviation of 4.89 with a mean difference of 6.70 with standard deviation of 4.80 showing statistically significant differences in both the pre and post total score on mc gill pain questionnaire. The pre-intervention mean total score on the mc gill pain questionnaire was 23.10 with a standard deviation of 2.38 and the post-intervention mean total score on the mc gill pain questionnaire was 16.40 with a standard deviation of 4.89 with a mean difference of 6.70 with standard deviation of 4.80 showing statistically significant differences in both the pre and post total score on mc gill pain questionnaire. The pre-intervention mean visual analog scale score was 5.60 with a standard deviation of 1.82 and the post-intervention mean visual analog scale score was 3.70 with a standard deviation of 1.63 with a mean difference of 1.90 with a standard deviation of 0.79 showing statistically significant differences in both the pre and post total score on visual analog scale. The pre-intervention mean score on the brief resilience scale was 2.25 with a standard deviation of 0.72 and the post-intervention mean visual analog scale score was 3.61 with a standard deviation of 0.51 with a mean difference of -1.36 with a standard deviation of 0.73 showing statistically significant differences in both the pre and post total score on brief resilience scale.

Table 14 shows the pre and post-intervention scores using student t-test analysis in the control group. The pre-intervention mean sensory score on the mc gill pain questionnaire was 20.00 with a standard deviation of 6.18 and the post-intervention mean sensory score on the mc gill pain questionnaire was 18.90 with a standard deviation of 6.78 with a difference of 1.10 with standard deviation of 1.12 showing statistically

significant differences in both the pre and post sensory score on mc gill pain questionnaire.

The pre-intervention mean affective score on the mc gill pain questionnaire was 6.45 with a standard deviation of 2.14 and the post-intervention mean affective score on the mc gill pain questionnaire was 6.25 with a standard deviation of 2.47 with a mean difference of 0.20 with a standard deviation of 0.83 showing no statistically significant differences in both the pre and post affective score on mc gill pain questionnaire.

The pre-intervention mean total score on the mc gill pain questionnaire was 26.45 with a standard deviation of 7.52 and the post-intervention mean total score on the mc gill pain questionnaire was 25.20 with a standard deviation of 8.35 with a mean difference of 1.25 with a standard deviation of 1.65 showing statistically significant differences in both the pre and post total score on mc gill pain questionnaire.

The pre-intervention mean Visual Analog scale score was 5.65 with a standard deviation of 1.53 and the post-intervention mean visual Analog scale score was 4.95 with a standard deviation of 1.73 with a mean difference of 0.70 with a standard deviation of 0.80 showing statistically significant differences in both the pre and post total score on the visual analog scale. The pre-intervention mean score on the brief resilience scale was 2.91 with a standard deviation of 0.92 and the post-intervention mean visual analog scale score was 2.78 with a standard deviation of 0.91 and with mean difference of 0.13 with a standard deviation of 0.39 showing no statistically significant differences in both the pre and post total score on brief resilience scale.

Table 15 shows the pre and post-intervention differences in mean in both the experimental group and control group.
In the experimental group, the mean difference on the sensory domain of the mc gill pain questionnaire was 4.20 with a standard deviation of

3.02 which shows a statistically significant difference. It shows that the intervention used was statistically efficient in reducing the sensory scores on the mc gill pain questionnaire. Whereas, in the control group wherein the intervention was not given, the mean difference on the sensory domain of mc gill pain questionnaire was 1.10 with a standard deviation of 1.12 which shows a statistically significant difference. It shows that the scores on the sensory domain of the McGill pain questionnaire reduced even without the intervention but the improvement was more in the experimental group as compared to the control group.

In the experimental group, the mean difference on the Affective domain of mc gill pain questionnaire was 2.50 with a standard deviation of 2.50 which shows a statistically significant difference. It shows that the intervention used was statistically efficient in reducing the affective scores on the mc gill pain questionnaire. Whereas, in the control group wherein the intervention was not given, the mean difference on the affective domain of mc gill pain questionnaire was 0.20 with a standard deviation of 0.83 which shows no statistically significant difference which means that the scores did not reduce at a statistically significant level without the intervention. Whereas, the intervention used in the study was effective in reducing the affective scores on the McGill pain questionnaire.

In the experimental group, the mean difference in the total scores of the mc gill pain questionnaire was 6.70 with a standard deviation of 4.80 which shows a statistically significant difference. It shows that the intervention used was statistically efficient in reducing the total scores on the McGill pain questionnaire. Whereas, in the control group wherein the intervention was not given, the mean difference on the total scores of mc gill pain questionnaire was 1.25 with a standard deviation of 1.65 which shows a statistically significant difference. It shows that the total scores on the McGill pain questionnaire reduced even without the intervention but the improvement was more in the experimental group as compared to the control group.

In the experimental group, the mean difference in the total scores of the Visual Analog scale was 1.90 with a standard deviation of 0.79 which shows a statistically significant difference. It shows that the intervention used was statistically efficient in reducing the total scores on the Visual Analog scale. Whereas, in the control group wherein the intervention was not given, the mean difference on the total scores of the Visual Analog scale was 0.70 with a standard deviation of 0.80 which shows a statistically significant difference. It shows that the total scores on the Visual Analog scale reduced even without the intervention but the improvement was more in the experimental group as compared to the control group.

In the experimental group, the mean difference on the Brief resilience scale scores was -1.36 with a standard deviation of 0.73 which shows a statistically significant difference. It shows that the intervention used was statistically efficient in increasing scores on the Brief resilience scale. Whereas, in the control group wherein the intervention was not given, the mean difference was 0.13 with a standard deviation of 0.39 which shows no statistically significant difference which means that the scores did not increase at a statistically significant level without the intervention. Whereas, the intervention used in the study was effective in increasing the scores on the Brief resilience scale.

Thus, based on the results discussed above, the use of Guided imagery showed positive results in terms of intensity and quality of pain and Resilience. Patients in the experimental group were observed to have improved more than the control group post the guided imagery intervention.

Thus, based on the results discussed above, the use of guided imagery showed positive results in terms of quality and severity of pain associated with dressing change and resilience in burn patients. The pre and post effect of Guided imagery on quality and severity of pain associated with dressing change and resilience in burn patients was more in experimental group than control group.

DISCUSSION

The present study was conducted to study the effect of guided imagery on the quality and severity of pain associated with dressing change in burn patients and to study the effect of guided imagery on resilience in burn patients. The study was conducted on burn patients from 18 to 60 years of age, with either second, third, or fourth-grade burn with burn percentage ranging from 20%-70% admitted in Burn ICU or Burn ward at Dayanand Medical College, Ludhiana undergoing treatment from 01.12.2022 to 1.08.2023. The patients who met the inclusion and exclusion criteria were selected and were divided into control and experimental groups on an odd-even basis. They will be evaluated for resilience using the Brief Resilience Scale, and for intensity and quality of pain the Visual Analog Scale (VAS), and the short-form McGill Pain Questionnaire (SF-MPQ) were administered. Then in both groups, the level of pain and resilience was assessed after the dressing change. Each participant underwent four sessions of Guided imagery. One Guided imagery session was conducted one day before the dressing of the patient started. The duration of the guided imagery sessions was 15-20 minutes each. The Guided imagery sessions were delivered via individual therapy settings. After completion of the fourth Guided imagery session, participants were reevaluated for resilience, intensity, and quality of pain. The data thus collected was tabulated and then analysed using SPSS. The results have been discussed below in light of prevailing research evidence

SOCIO-DEMOGRAPHIC VARIABLES

Data was described in terms of age group, sex, education, occupation, address, family type, diagnosis, grade of burn, age, and burn percentage.

AGE GROUP

The study was conducted on adult participants from the age group 18-60 years. There were 4 age groups. 18-30 years, 31- 40 years, 41-50 years and 50-60 years. The mean age for the experimental group was 33.15 and the control group was 36.70. The mean ages for both groups

were compared using a t-test and the value obtained was not statistically significant. Thus, the groups were homogenous based on the distribution of age.

However, there has not been much literature on the family type of burn patients. The current study's findings add to the gap in the literature.

SEX

The study was not restricted in terms of sex. However, there were more number of men in both the experimental and control group. The current findings are supported by the literature given by Gupta et al. (2011) [82], khan et al. (2007) [83], Batra, 2003 [84], and Grout. et al (1993) [85] Gupta et al. (1993) [86] and Kalra et al. (2019) [87].

EDUCATIONAL QUALIFICATION

In the experimental group 55 % of the total participants were illiterate and 30% of the total participants were illiterate in the control group. There were more number of illiterate patients in the group. This finding was supported by the literature given by Gupta et al. (2010) (1) and Daruwalla et al. (2014). [88]

10% of the total participants were educated up to 10th standard in the experimental group and 20% of the total participants were educated up to 10th standard in the control group. 15% of the total participants were educated up to the 12th standard in the experimental group and 35% of the total participants were educated up to the 12th standard in the control group. 20% of the total participants were educated up to graduation level in the experimental group and 5% of the total participants were educated up to graduation level in the control group. 0% of the total participants were educated up to post-graduation level in the experimental group and 10% of the total participants were educated up to post-graduation level in the control group. There was no statistically significant difference between the experimental and control groups based on the education of the participants groups indicating homogeneity of groups. The differences in education qualification in both groups were due to chance factors.

OCCUPATION:

In the experimental group, 30% of the participants were farmers/clerical/shopkeepers, whereas in the control group, 60% of the participants were farmers/clerical/ shopkeepers. In the experimental group, 30% of the participants were Semi-skilled/ skilled workers, whereas in the control group, 40% of the participants were Semi-skilled/ skilled workers. In the experimental group, 10% of the participants were unemployed, whereas in the control group, 10% of the participants were unemployed. In the experimental group, 0% of the participants were from other professions, whereas in the control group, 10% of the participants were from other professions.

In the experimental group, 0% of the participants were professionals, whereas in the control group, 5% of the participants were professionals. There was more prevalence of burn injuries in Semi-skilled/ skilled workers in both the experimental and control groups. This finding was supported

by the literature given by Gupta et al (2011). [82]

The differences in occupation in both groups were due to chance factors.

ADDRESS:

There was no restriction in terms of the address of the patient. In the experimental group, 20% of the total participants were from urban areas whereas in the control group, 40% of the total participants were from urban areas. In the experimental group, 80% of the total participants were from rural areas whereas in the control group, 40% of the total participants were from rural areas. More residents of rural areas had burn injuries both in the experimental and control groups. These findings were supported by the literature given by Batra, 2003. [84]

FAMILY TYPE:

In the experimental group, 55% of the total participants were from the nuclear family whereas in the control group, 35% of the total participants were from a joint family. In the experimental group, 45% of the total participants were from joint families whereas in the control group, 65% of the total participants were from joint families.

However, there has not been much literature on the family type of burn patients. The current study's findings add to the gap in the literature.

DIAGNOSIS:

There were more number of patients with the diagnosis of flame burn in the control group. In the control group 55% of the total participants had the diagnosis of flame burn. This finding was supported by the literature given by, Gupta et al. (2011) [82], Gupta et al.(1993) [86], and Kalra et al.(2019) [87] whereas In the experimental group, 35% of the total participants had the diagnosis of flame burn. In the experimental group 5% of the total participants had the diagnosis of chemical burn whereas in the control group, 0% of the total participants were from the control group.

In the experimental group 45% of the total participants had the diagnosis of electric burn whereas in the control group, 30% of the total participants had the diagnosis of electric burn. In the experimental group 15% of the total participants had the diagnosis of thermal burn whereas in the control group, 5% of the total participants were from the control group. In the experimental group 0% of the total participants had the diagnosis of thermal contact burn whereas in the control group, 5% of the total participants were from the control group. In the experimental group 0% of the total participants had the diagnosis of thermal flame burn whereas in the control group, 5% of the total participants were from the control group. The differences in diagnosis in both groups were due to chance factors.

GRADE OF BURN:

In the experimental group 40% of the total participants had the diagnosis of grade 2 burn whereas in the control group, 30% of the total participants had the diagnosis of grade 2 burn. In the experimental group 60% of the total participants had the diagnosis of grade 3 burn whereas in the control group, 70% of the total participants had the diagnosis of grade 3 burn. There were more grade 3 burn patients in both the experimental and control groups. This finding was supported by the literature given by Sreenivas et al. (2021) [89]

EFFECT OF GUIDED IMAGERY ON BURN PATIENTS

• To study the effect of guided imagery on the quality and severity of pain associated with dressing change in burn patients.

• To study the effect of guided imagery on resilience in burn patients.

QUALITY AND SEVERITY OF PAIN ASSOCIATED WITH DRESSING CHANGE IN BURN PATIENTS

In the experimental group, pre and post-test scores on the sensory domain of the McGill pain questionnaire were 1.60 and 12.49 respectively. The decrease in the score was 4.29 which was significant at 0.001 level.

This indicates that the participants experienced a substantial decrease in the sensory domain of the McGill pain questionnaire post the guided imagery intervention.

In the control group, pre and post-scores on the sensory domain of the McGill pain questionnaire were 20.00 and 18.90. The decrease in the score was 1.10 which was significant at 0.001 level.

These findings indicate that the decrease in the scores on the sensory domain of the McGill pain questionnaire was more in the experimental group than the control group.

In the experimental group, pre and post-scores on the affective domain of the McGill pain questionnaire were 6.50 and 4.00 respectively. The decrease in the score was 2.50 which was significant at 0.001 level.

This indicates that the participants experienced a substantial decrease in the affective domain of the McGill pain questionnaire post the guided imagery intervention.

In the control group, pre and post-test scores on the affective domain of the McGill pain questionnaire were 6.45 and 6.25. The decrease in the score was 0.20 which was not significant at 0.297 level.

These findings indicate that the decrease in the scores on the affective domain of the McGill pain questionnaire was present only in the experimental group.

In the experimental group, pre and post-total scores on Mc Gill pain questionnaire were 23.10 and 12.49 respectively. The decrease in the score was 6.70 which was significant at 0.001 level.

This indicates that the participants experienced a substantial decrease in the total scores on the McGill pain questionnaire post the guided imagery intervention.

In the control group, pre and post-total scores on the McGill pain questionnaire were 26.45 and 25.20. The decrease in the score was 1.25 which was significant at 0.003 level.

These findings indicate that the decrease in the Mc Gill pain questionnaire was more in the experimental group than the control group. This finding was supported by the literature given by Negar et al. (2017) [71]

In the experimental group, pre and post-total scores on the McGill pain questionnaire were respectively. The decrease in the score was 6.70 which was significant at 0.001 level.

This indicates that the participants experienced a substantial decrease in the total scores of Mc Gill pain questionnaire post the guided imagery intervention.

In the control group, pre and post-scores on the sensory domain of Mc Gill pain questionnaire were 5.65 and 4.95. The decrease in the score was 1.25 which was significant at 0.003 level.

These findings indicate that the decrease in the Mc Gill pain questionnaire was more in the experimental group than the control group.

In the experimental group, pre and post-total scores on the Visual Analog scale were 5.60 and 3.70 respectively. The decrease in the score was 1.90 which was significant at 0.001 level.

This indicates that the participants experienced a substantial decrease in the total scores on the Visual Analog scale post the guided imagery intervention. These findings are supported by the literature given by Aghakhani et al. (2021).[16]

In the control group, pre and post-test scores on the Visual Analog scale were 5.65 and 4.95 respectively. The decrease in the score was 0.70 which was significant at 0.001 level.

These findings indicate that the decrease in the total scores on Visual Analog was more in the experimental group than in the control group.

These abovementioned findings indicate that guided imagery is effective in reducing the severity and quality of pain associated with dressing change in burn patients. These findings are supported by the literature given by Aghakhani et al. (2021). [16] and Negar et al. (2017). [71]

RESILIENCE

In the experimental group, the pre and post-intervention scores on the Brief resilience scale were 2.25 and 3.61 respectively. The increase in the score was by -1.36 which was significant at 0.001 level.

This indicates that the participants experienced a substantial increase in resilience after the guided imagery intervention.

In the control group, the pre and post-intervention scores on the Brief resilience scale were 2.25 and 3.61 respectively. The increase in the score was by -1.36 which was significant at 0.001 level.

This indicates that the participants experienced a substantial increase in resilience after the guided imagery intervention. These findings were supported by the literature given by Shahabi et al. (2020) [81].

Thus, based on the results discussed above, the use of guided imagery showed positive results in terms of quality and severity of pain associated with dressing change and resilience in burn patients. The findings were supported by previous literature. .There has been a pre and post effect of guided imagery on the quality and severity of pain associated with dressing change and resilience in burn patients. The pre and post effect of Guided imagery on quality and severity of pain associated with dressing change and resilience in burn patients was more in experimental group than control group. The findings also filled in gaps in research by showing the effect of guided imagery on the quality and severity of pain associated with dressing in the Indian context and, the effect of guided imagery in increasing resilience in burn patients

and mean age and family type of burn patients. Hence, Guided imagery showed promising results as a complementary method to manage the pain associated with dressing changes in burn patients and increase their resilience.

LIMITATIONS

1. The sample size of the study was small.
2. The sample was limited in terms of age as only adult population was take. Burn injuries occur in children and elderly as well.
3. The sample was limited in terms of the grade of burn as only grade 2, 3 and 4 burn patients were included in the study.
4. The current study was a hospital- based study in a tertiary care hospital in an urban region of Punjab. This might limit the generalizability of the study to the Indian population.

SUMMARY & CONCLUSION

The present study was conducted to study the effect of guided imagery on the quality and severity of pain associated with dressing change in burn patients and to study the effect of guided imagery on resilience in burn patients. The study was conducted on burn patients from 18 to 60 years of age, with either second, third, or fourth-grade burn with burn percentage ranging from 20%-70% admitted in Burn ICU or Burn ward at Dayanand Medical College, Ludhiana undergoing treatment from 01.12.2022 to 1.08.2023. The patients who met the inclusion and exclusion criteria were selected and were divided into control and experimental groups on an odd-even basis. They will be evaluated for resilience using the Brief Resilience Scale, and for intensity and quality of pain the Visual Analog Scale (VAS), and the short-form McGill Pain Questionnaire (SF-MPQ) were administered. Then in both groups, the level of pain and resilience was assessed after the dressing change. Each participant underwent four sessions of Guided imagery. One Guided imagery session was conducted one day before the dressing of the patient started. The duration of the guided imagery sessions was 15-20 minutes each. The Guided imagery sessions were delivered via individual therapy settings. After completion of the fourth Guided imagery session, participants were evaluated for resilience, intensity, and quality of pain. The data thus collected was tabulated and then analysed using SPSS. The results have been discussed below in light of prevailing research evidence.

The following points were noted in the current study:

- The mean age of the experimental group was 33.3 with a standard deviation of 11.43 and of the control group was 36.70.
- There were more males in the control and experimental group, 80 % in the experimental and 95% in the control group.
- There was no statistical difference between the experimental and control groups based on age group.
- There were more number of illiterate burn patients in the experimental group. 55 % of the total participants were illiterate in

the experimental group and 30% of the total participants were illiterate in the control group. There was no statistically significant difference between the experimental and control groups based on the education of the participants groups indicating the homogeneity of groups.

- There were more number Semi-skilled/ skilled workers in both groups. In the experimental group, 60% of the participants were Semi-skilled/ skilled workers, whereas in the control group, 40% of the participants were Semi-skilled/ skilled workers.
- There were more participants from rural areas in both groups. In the experimental group, 80% of the total participants were from rural areas whereas in the control group, 40% of the total participants were from rural areas.
- In the experimental group, 55% of the total participants were from the nuclear family whereas in the control group, 35% of the total participants were from a joint family. In the experimental group 45% of the total participants were from joint families whereas in the control group 65% of the total participants were from joint families. However, there has not been much literature on the family type of burn patients. The current study's findings add to the gap in the literature.
- There were a greater number of patients with the diagnosis of flame burn in the control group. In the experimental group 35% of the total participants had the diagnosis of flame burn whereas in the control group, 55% of the total participants had the diagnosis of flame burn.
- There were more participants in the experimental group with the diagnosis of an electric burn than control group. In the experimental group 45% of the total participants had the diagnosis of electric burn whereas in the control group, 30% of the total participants had the diagnosis of electric burn.
- There were more participants with the diagnosis of grade 3 burn in both groups In the experimental group 60% of the total

participants had the diagnosis of grade 3 burn whereas in the control group, 70% of the total participants had the diagnosis of grade 3 burn.

- The mean burn percentage of the experimental group was 36.50 with a standard deviation of 12.37 and of the control group was 40.25 with a standard deviation of 20.49.
- In the experimental group, pre and post-test scores on the sensory domain of the McGill pain questionnaire were 1.60 and 12.49 respectively. The decrease in the score was 4.29 which was significant at 0.001 level.
- The participants experienced a substantial decrease in the sensory domain of the McGill pain questionnaire post the guided imagery intervention.
- In the control group, pre and post-scores on the sensory domain of the McGill pain questionnaire were 20.00 and 18.90. The decrease in the score was 1.10 which was significant at 0.001 level.
- The decrease in the scores on the sensory domain of the McGill pain questionnaire was more in the experimental group than the control group.
- In the experimental group, pre and post-test scores on the affective domain of the McGill pain questionnaire were 6.50 and 4.00 respectively.
- The decrease in the score was 2.50 which was significant at 0.001 level.
- The participants experienced a substantial decrease in the affective domain of the McGill pain questionnaire post the guided imagery intervention.
- In the control group, pre and post-test scores on the affective domain of the McGill pain questionnaire were 6.45 and 6.25. The decrease in the score was 0.20 which was not significant at 0.297 level.

- The decrease in the scores on the affective domain of the McGill pain questionnaire was present only in the experimental group.
- In the experimental group, pre and post-total scores on the McGill pain questionnaire were 23.10 and 12.49 respectively. The decrease in the score was 6.70 which was significant at 0.001 level.
- The participants experienced a substantial decrease in the total scores on the Gill pain questionnaire post the guided imagery intervention.
- In the control group, pre and post-total scores on the Gill pain questionnaire were 26.45 and 25.20. The decrease in the score was 1.25 which was significant at 0.003 level.
- The decrease in the McGill pain questionnaire was greater in the experimental group than in the control group.
- In the experimental group, pre and post-total scores on the McGill pain questionnaire were respectively. The decrease in the score was 6.70 which was significant at 0.001 level.
- The participants experienced a substantial decrease in the total scores on the McGill pain questionnaire post the guided imagery intervention.
- In the control group, pre and post-scores on the sensory domain of the McGill pain questionnaire were 5.65 and 4.95. The decrease in the score was 1.25 which was significant at a 0.003 level
- The decrease in the McGill pain questionnaire was greater in the experimental group than in the control group.
- In the experimental group, pre and post-total scores on the Visual Analog scale were 5.60 and 3.70 respectively. The decrease in the score was 1.90 which was significant at 0.001 level.
- The participants experienced a substantial decrease in the total scores on the Visual Analog scale post the guided imagery intervention.

- In the control group, pre and post-test scores on the Visual Analog scale were 5.65 and 4.95 respectively. The decrease in the score was 0.70 which was significant at 0.001 level.
- The decrease in the total scores on Visual Analog was greater in the experimental group than in the control group.
- Guided imagery is effective in reducing the severity and quality of pain associated with dressing change in burn patients.
- In the experimental group, the pre and post-intervention scores on the Brief resilience scale were 2.25 and 3.61 respectively. The increase in the score was by -1.36 which was significant at 0.001 level.
- The participants experienced a substantial increase in resilience after the guided imagery intervention.
- In the control group, the pre and post-intervention scores on the Brief resilience scale were 2.25 and 3.61 respectively. The increase in the score was by -1.36 which was significant at 0.001 level.
- The participants experienced a substantial increase in resilience after the guided imagery intervention.

To conclude, Guided imagery showed positive results in terms of decreasing the quality and severity of pain associated with dressing changes and increasing the resilience in burn patients. There has been a pre and post effect of guided imagery on the quality and severity of pain associated with dressing change and resilience in burn patients. The pre and post effect of Guided imagery on quality and severity of pain associated with dressing change and resilience in burn patients was more in experimental group than control group.

This study also filled in the research gap by showing the family type and mean age of burn patients. Thus, Guided imagery showed promising results as a complementary method to manage the pain associated with dressing change in burn patients and increase their resilience. Future complimentary pain management and resilience-building interventions could be planned on Guided Imagery for burn patients.

FUTURE DIRECTIONS

The findings of the present study showed the effectiveness of Guided imagery in reducing the quality and severity of pain associated with dressing change and increasing the resilience in burn patients. Thus, future interventions could be planned on complimentary pain management and resilience building in burn patients based on Guided imagery. Further research on the effectiveness of Guided imagery could be done with a bigger sample size and with participants from different age groups. Studies in the domain of family type of burn patients, and comparison of the efficacy of guided imagery and other relaxation techniques could yield beneficial data. Other variables like anxiety associated with dressing change, psychological impact of the long duration of hospital stay, psychological impact of burn injury on the family members, and body image issues due to burn injuries could be incorporated into in-depth studies on burn patients in the region

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control group scores	mrd no	Group	age	age group	sex	education	occupation	address	family type	diagnosis	grade of burn	burn percentage	pre intervention scores	mc gill pain questionnaire - pre sensory	pre affective
control group scores	1514131	1	20	1	male	12th	Semi-skilled worker	Rural	Joint	electric burn	2	30	-	15	8
control group scores	1580710	1	20	1	male	10th	Semi-skilled worker	Urban	Joint	thermal flame burn	3	50	-	14	5
control group scores	1500757	1	28	1	male	12th	Farmer	Rural	Joint	thermal contact burn	2	30	-	8	7
control group scores	1572124	1	30	1	male	Graduate	Professional	Rural	Joint	electric burn	2	20	-	16	7
control group scores	1526161	1	57	4	male	Illiterate	Semi-skilled worker	Rural	Nuclear	electric burn	2	20	-	25	9
control group scores	1574337	1	56	4	male	Illiterate	Farmer	Rural	Joint	thermal burn	2	25	-	16	4
control group scores	1486766	1	53	4	male	Post graduate	Other	Urban	Joint	flame burn	3	25	-	19	4
control group scores	1426103	1	21	1	male	10th	Semi-skilled worker	Urban	Joint	electric burn	3	30	-	16	5
control group scores	1426892	1	50	3	male	Illiterate	Farmer	Urban	Nuclear	flame burn	2	20	-	14	5
control group scores	1433202	1	26	1	male	12th	Semi-skilled worker	Urban	Nuclear	flame burn	3	20	-	25	9
control group scores	1437817	1	37	2	male	Post graduate	Other	Urban	Joint	flame burn	3	70	-	20	9
control group scores	1441864	1	45	3	female	Illiterate	Unemployed	Rural	Joint	flame burn	3	40	-	16	4
control group scores	1450039	1	21	1	male	Illiterate	Unemployed	Rural	Joint	flame burn	3	70	-	25	9
control group scores	1460343	1	42	3	male	10th	Semi-skilled worker	Rural	Nuclear	electric burn	3	30	-	20	5
control group scores	1496989	1	27	1	male	12th	Semi-skilled worker	Urban	Nuclear	flame burn	3	40	-	16	4
control group scores	1517872	1	32	2	male	Illiterate	Farmer	Rural	Joint	flame burn	3	25	-	19	4
control group scores	1523060	1	34	2	male	10th	Semi-skilled worker	Urban	Joint	flame burn	3	50	-	28	8
control group scores	1529325	1	34	2	male	12th	Shopkeeper	Rural	Joint	flame burn	3	80	-	30	10
control group scores	1537872	1	50	3	male	12th	Shopkeeper	Rural	Nuclear	flame burn	3	80	-	30	8
control group scores	1512827	1	51	4	male	12th	Farmer	Rural	Nuclear	electric burn	3	50	-	28	5
expereimental group	1512567	2	35	2	male	10th	Semi-skilled worker	Rural	Nuclear	flame burn	2	40	-	16	7
expereimental group	1513570	2	38	2	male	Illiterate	Semi-skilled worker	Rural	Nuclear	thermal burn	2	30	-	17	4
expereimental group	1504007	2	40	2	female	12th	Unemployed	Rural	Nuclear	thermal burn	3	30	-	17	6
expereimental group	1573844	2	26	1	male	Illiterate	Semi-skilled worker	Urban	Nuclear	electric burn	2	20	-	18	6
expereimental group	1573845	2	25	1	male	Illiterate	Semi-skilled worker	Urban	Nuclear	electric burn	2	20	-	21	10
expereimental group	1476924	2	22	1	male	Illiterate	Farmer	Rural	Joint	electric burn	3	40	-	12	6
expereimental group	1463280	2	29	1	female	Graduate	Unemployed	Rural	Joint	flame burn	3	40	-	14	8

control group scores	mrd no	Group	pre total	pre visual analog scale	pre brief resilience scale	post mc gill pain questionnaire - sensory	post affective	post total	post visual analog scale	post brief resilience scale	mc gill pain questionnaire - sensory	affective	total	visual analog scale	brief resilience scale
control group scores	1514131	1	23	7	2	12	8	20	5	2	3	0	3	2	0
control group scores	1580710	1	19	6	2.33	12	5	17	5	2.33	2	0	2	1	0
control group scores	1500757	1	15	5	1.66	6	7	13	4	1.66	2	0	2	1	0
control group scores	1572124	1	23	6	4	14	7	21	5	4	2	0	2	1	0
control group scores	1526161	1	34	3	3.33	25	9	34	3	3.33	0	0	0	0	0
control group scores	1574337	1	20	5	3	16	4	20	4	3	0	0	0	1	0
control group scores	1486766	1	23	3	2.83	18	6	25	3	2.83	1	-2	-2	0	0
control group scores	1426103	1	21	5	4	16	5	21	5	2.5	0	0	0	0	1.5
control group scores	1426892	1	19	6	2	12	5	17	4	2	2	0	2	2	0
control group scores	1433202	1	34	7	2	25	9	34	7	2	0	0	0	0	0
control group scores	1437817	1	29	7	4	20	9	29	7	4	0	0	0	0	0
control group scores	1441864	1	20	4	3	14	2	16	3	2	2	2	4	1	1
control group scores	1450039	1	34	3	4	25	9	34	3	4	0	0	0	0	0
control group scores	1460343	1	25	5	2	18	3	21	3	2	2	2	4	2	0
control group scores	1496989	1	20	7	2	15	3	18	6	2	1	1	2	1	0
control group scores	1517872	1	23	5	4	17	3	20	3	4	2	1	3	2	0
control group scores	1523060	1	36	8	4	28	8	36	8	4	0	0	0	0	0
control group scores	1529325	1	40	7	4	30	10	40	7	4	0	0	0	0	0
control group scores	1537872	1	38	7	2	30	8	38	7	2	0	0	0	0	0
control group scores	1512827	1	33	7	2	25	5	30	7	2	3	0	3	0	0
expereimental group	1512567	2	23	4	2.33	10	5	15	2	3.5	6	2	8	2	-1.17
expereimental group	1513570	2	21	9	1.66	14	7	21	7	4	3	-3	0	2	-2.34
expereimental group	1504007	2	23	4	3.83	7	2	9	2	3.83	10	4	14	2	0
expereimental group	1573844	2	24	5	2	5	0	5	2	4	13	6	19	3	-2
expereimental group	1573845	2	31	8	2	17	5	22	5	3.66	4	5	9	3	-1.66
expereimental group	1476924	2	18	2	2.16	7	0	7	1	3.66	5	6	11	1	-1.5
expereimental group	1463280	2	22	5	2	9	4	13	3	3.66	5	4	9	2	-1.66

control group scores	mrd no	Group	age	age group	sex	education	occupation	address	family type	diagnosis	grade of burn	burn percentage	pre intervention scores	mc gill pain questionnaire - pre sensory	pre affective
expereimental group	1426182	2	30	1	male	Graduate	Unemployed	Rural	Joint	electric burn	2	30	-	17	4
expereimental group	1431127	2	51	4	male	Illiterate	Semi-skilled worker	Rural	Nuclear	electric burn	2	30	-	17	6
expereimental group	1431156	2	45	3	female	Illiterate	Unemployed	Rural	Joint	flame burn	3	50	-	18	6
expereimental group	1438086	2	55	4	male	Illiterate	Semi-skilled worker	Rural	Nuclear	flame burn	3	50	-	18	6
expereimental group	1445805	2	34	2	female	Illiterate	Unemployed	Rural	Joint	flame burn	2	35	-	17	6
expereimental group	1450042	2	21	1	male	Graduate	Unemployed	Rural	Joint	flame burn	3	30	-	14	8
expereimental group	1496991	2	28	1	male	12th	Semi-skilled worker	Rural	Joint	flame burn	2	25	-	18	6
expereimental group	1516349	2	19	1	male	Graduate	Unemployed	Rural	Joint	electric burn	3	40	-	16	7
expereimental group	1522201	2	29	1	male	Illiterate	Semi-skilled worker	Urban	Nuclear	electric burn	3	40	-	18	6
expereimental group	1532401	2	36	2	male	Illiterate	Semi-skilled worker	Urban	Nuclear	chemical burn	3	50	-	18	6
expereimental group	1529421	2	18	1	male	Illiterate	Semi-skilled worker	Rural	Nuclear	electric burn	3	20	-	14	8
expereimental group	1550652	2	56	4	male	12th	Semi-skilled worker	Rural	Joint	thermal burn	3	70	-	18	6
expereimental group	1573844	2	26	1	male	10th	Semi-skilled worker	Rural	Nuclear	electric burn	3	40	-	14	8

control group scores	mrd no	Group	pre total	pre visual analog scale	pre brief resilience scale	post mc gill pain questionnaire - sensory	post affective	post total	post visual analog scale	post brief resilience scale	mc gill pain questionnaire - sensory	affective	total	visual analog scale	brief resilience scale
expereimental group	1426182	2	21	9	1.66	14	7	21	7	4	3	-3	0	2	-2.34
expereimental group	1431127	2	23	4	3.83	17	6	23	4	3.83	0	0	0	0	0
expereimental group	1431156	2	24	5	2	15	3	18	3	4	3	3	6	2	-2
expereimental group	1438086	2	24	6	1.66	14	4	18	4	3.5	4	2	6	2	-1.84
expereimental group	1445805	2	23	5	3.83	15	4	19	3	4	2	2	4	2	-0.17
expereimental group	1450042	2	22	5	2	14	8	22	5	3.5	0	0	0	0	-1.5
expereimental group	1496991	2	24	6	1.66	14	2	16	4	2.16	4	4	8	2	-0.5
expereimental group	1516349	2	23	4	2.33	10	5	15	2	3.5	6	2	8	2	-1.17
expereimental group	1522201	2	24	5	2.33	14	2	16	3	4	4	4	8	2	-1.67
expereimental group	1532401	2	24	6	1.66	14	2	16	4	2.33	4	4	8	2	-0.67
expereimental group	1529421	2	22	7	2	12	4	16	5	4	2	4	6	2	-2
expereimental group	1550652	2	24	8	2	14	4	18	5	3.5	4	2	6	3	-1.5
expereimental group	1573844	2	22	5	2	12	6	18	3	3.5	2	2	4	2	-1.5

TO STUDY EFFECT OF GUIDED IMAGERY ON THE QUALITY AND SEVERITY OF PAIN ASSOCIATED WITH DRESSING CHANGE AND RESILIENCE IN BURN PATIENTS

DISSERTATION PROPOSAL

FOR APPROVAL OF SUBJECT OF DISSERTATION TO BE

SUBMITTED

IN PARTIAL FULFILMENT OF THE REQUIREMENTS

FOR THE DEGREE OF

M. PHIL

IN

CLINICAL PSYCHOLOGY

OF THE

BABA FARID UNIVERSITY OF HEALTH SCIENCES
FARIDKOT

MAY 2022

SHRUTI KALRA

DEPARTMENT OF CLINICAL PSYCHOLOGY
DAYANAND MEDICAL COLLEGE AND HOSPITAL
LUDHIANA

ABSTRACT OF PLAN OF DISSERTATION

Title	TO STUDY EFFECT OF GUIDED IMAGERY ON THE QUALITY AND SEVERITY OF PAIN ASSOCIATED WITH DRESSING CHANGE AND RESILIENCE IN BURN PATIENTS.
For the degree of	M.Phil Clinical Psychology
Name of the candidate	Ms. Shruti kalra
Supervisor	Dr. Bholeshwar Prasad Mishra, Professor & Head, Department of Clinical Psychology, DMCH, Ludhiana
Co-supervisor	Dr. Rajinder Mittal, Professor& Head, Department of Plastic Surgery, DMCH, Ludhiana Palak Upadhyay, Assistant Professor, Department of Clinical Psychology, DMCH, Ludhiana
Institution	Dayanand Medical College & Hospital, Ludhiana
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Introduction: Severe pain poses a great challenge for people suffering from burn injuries. Guided imagery helps in reducing pain as leads to the creation of a cognitive and emotional state which is helpful in preventing and reducing pain and other sources of distress. Resilience is the ability of a person to adapt to various challenges and difficulties. Guided imagery helps in increasing the resilience of the person.

Aim of Study: 1) To study the effect of guided imagery on the quality and severity of pain associated with dressing change in burn patients.2) To study the effect of guided imagery on resilience in burn patients.3) To study the pre and post effect of guided imagery on the quality and severity of pain associated with dressing change and resilience in burn patients.

Materials & methods: The study will be conducted on burn patients admitted in the Burn ICU and Ward And pre and post intervention evaluation will be done using Brief Resilience Scale, Visual Analog Scale (VAS),and short-form McGill Pain Questionnaire (SF-MPQ).

Clinical Significance: the study will contribute to the complimentary management of pain and increase in resilience in burn patients.

Keywords: Pain,burninjurypain,Resilience,Psycholgicaldistress,dressing change,burnpatients,burninjury

(Signature) Candidate	(Signature) Co-supervisor	(Signature) Co-supervisor	(Signature) Supervisor	(Signature) Principal

CERTIFICATE OF FACILITIES AVAILABLE

This is to certify that the facilities for work on the subject of dissertation titled **"TO STUDY EFFECT OF GUIDED IMAGERY ON THE QUALITY AND SEVERITY OF PAIN ASSOCIATED WITH DRESSING CHANGE AND RESILIENCE IN BURN PATIENTS"** exist in the Department of Clinical Psychology, DMC&H, Ludhiana and will be provided to the candidate. We will see that the data being included in the dissertation is genuine and is collected by the candidate herself under our supervision and guidance.

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3	COURSE OF STUDY AND SUBJECT	M. PHIL. CLINICAL PSYCHOLOGY
4	DATE OF ADMISSION OF COURSE	01.03.2022
5	TITLE OF THE TOPIC	TO STUDY EFFECT OF GUIDED IMAGERY ON THE QUALITY AND SEVERITY OF PAIN ASSOCIATED WITH DRESSING CHANGE AND RESILIENCE IN BURN PATIENTS

6. BRIEF RESUME OF THE INTENDED WORK

6.1 NEED FOR THE STUDY

The annual burn incidence in India is estimated to be around 6-7 million. The high rate is ascribed to the population's illiteracy, poverty, and lack of safety awareness. (1)

Chronic pain is a constant component in patients suffering from burn injuries. Pain related to the dressing change is one of the major hurdle which burn patients have to face during their path of recovery. (2)

Primary treatment for pain in burn patients is pharmacotherapy consisting of opioids. Whereas, non pharmacological treatments can be useful addition in the management of pain. Using a multi modal approach to pain management including pharmacological and complimentary therapy enables a patient to take control of his or her pain and recovery.(3) The burn trauma leads to decrease in the threshold of the tolerance in the patient which increases the perception of the severity of the pain. The psychological management may help these patients to improve their tolerance of the pain.

Some of the main characteristics of burn pain are that it is long lasting in nature and that the nociceptive procedures are repetitive in nature which can lead to severe psychological disturbances if the pain management is not efficient and appropriate. (4) Poor control of pain can lead to extension of hospital stay and extended use of opioids use, and reduction in quality of life. Severe psychological distress is a prominent complication of burn injuries.(5) Resilience is the ability of a person to overcome the life's difficulties. Resilient people are known to be dynamic and flexible in their approach to life. According to Newman, psychological resilience is the ability of a person to adapt to the adversity of life.(6) According to Souri and Hasanirad (2011) It is a critical element in maintaining a prominent level of psychological wellbeing. (7) Resilience encompasses not only enhancing a person's tolerance and adaptability in dealing with a crisis, but also sustaining and boosting mental health. (6)

Guided imagery is a process of formulating mental imagery involving various senses using the imagination and prior memory of the individual.[2]

Guided imagery is becoming an increasing famous pain management technique in the healthcare community as it is a technique which uses mental imagery of pleasant sights, smells , sounds , tastes or somatic sensations which leads to the creation of a cognitive and emotional state which is helpful in preventing and reducing pain and other sources of distress.[3]

According to Shahabi ,Ehteshamzadeh ,Asgari and Makvandi, 2020 studies have shown that visualization has been effective in reducing pain by formulation of creative focus and enhancing the sense of wellbeing. Guided mental imagery is excellent at distracting the patient's attention from bothersome stimuli, promoting relaxation, improving mood, and increasing resilience[6]

Guided imagery was found to be effective in reducing the pain associated with dressing change in burn patients. [2]

Severe pain poses a great challenge for people suffering from burn injuries. Burn injuries patients go through regular nociceptive procedure like regular dressing changes which can lead to severe pain. It not only restricts the mobility of the person but also poses various forms of psychological distress to the patient. Poor management of pain can lead to many disadvantages like increased stay in the hospital as well as well as increased use of opioids for management for pain. Guided imagery is a process in which the individual creates a thought process wherein they are required to see, hear, feel, or smell what he or she wants to feel at that time, as well as visualize it in his or her imagination. Furthermore, guided imagery utilizes images, landscapes, sounds, music, and words to produce a sense of power and calm. Guided imagery helps in reducing pain as leads to the creation of a

cognitive and emotional state which is helpful in preventing and reducing pain and other sources of distress.

Guided imagery has been known to be effective in the reduction of the pain associated with the pain associated with dressing change in burn patients .Resilience is the ability of a person to adapt to various challenges and difficulties. A resilient person is dynamic and flexible in nature. Resilience is not only related to enhancing the ability of a person to cope with the difficulties of life but it also sustaining and boosting mental health. Guided imagery helps in increasing the resilience of the person.

There is a dearth of studies in this domain of how guided imagery can be used a s complimentary method to manage the pain associated with dressing change in burn patients. Although, work has been done on this domain, very few researches have been done in the Indian context.

INTERVENTION TO BE USED IN THE STUDY

Guided imagery is a part of mind body training. It is based on the basis that mind and body are interconnected and this connection can be helpful for curing of chronic physical diseases. The imaging process activates the same areas of the brain which are activated when an individual experiences a real time event. The individual in this process creates a thought process wherein they are required to see, hear, feel, or smell what he or she wants to feel at that time, as well as visualise it in his or her imagination. Furthermore, guided imagery utilises images, landscapes, sounds, music, and words to produce a sense of power and calm. People who are imaging are asked to take deep abdominal and diaphragmatic breaths, then relax their muscles and envision settings such as forests, beaches, and holy places, while paying attention to the noises and smells around them.

6.2 REVIEW OF LITERATURE

On a study done on 60 students, Imaging ability, proposed as a moderator in the relationship between guided imagery and symptom relief. Two existing measures of image generation, Marks's (1973) Vividness of Visual Imagery Questionnaire and Betts's (1909) shortened Questionnaire Upon Mental Imagery (Sheehan, 1967), and one measure of absorption, Tellegen's Absorption scale (1993; TAS) were completed by 60 graduate students prior to listening to a guided imagery intervention to relieve anxiety associated with an upcoming stressful task. Analyses were conducted using data from 30 participants (7 men and 23 women) who reported an increase in anxiety level after learning of the stressful task. Participants were divided into two groups, successful (*n* = 21) and unsuccessful (*n* = 9) users of imagery, based on change in anxiety scores after listening to the guided imagery intervention. Absorption (TAS) scores were significantly higher for persons in the successful group; there were no differences in image generation scores. Findings may be helpful in developing a clinically useful instrument to predict likelihood of success with guided imagery in relieving cancer pain and its distress. [8]

Dalal, Saha, and Agarwal 2010 stated in an article titled psychiatric aspects of burn that the emotional problems experienced by people suffering burn injuries, who number in the hundreds of thousands, have been largely ignored. The emotional needs of patients with burns have long been overshadowed by the emphasis on survival. Patients undergo various stages of adjustment and face emotional challenges that parallel the stage of physical recovery. They also stated that greater levels of acute pain are associated with negative long-term psychological effects such as acute stress disorder, depression, suicidal ideation, and post-traumatic stress disorder for as long as 2 years after the initial burn injury. [5]

On a study done to see the Biological Mechanisms Related to the Effectiveness of Guided Imagery for Chronic Pain it one if the major aims was to determine the effect of a guided imagery (GI) intervention over an 8-week period on pain and pain disability in a sample of persons with chronic non cancer pain (CNCP) . it was found out that GI was effective in reducing pain intensity and pain disability over an 8-week period. [10]

A new theory of mind–body interaction in healing is proposed based on considerations from the field of perception. It is suggested that the combined effect of visual imagery and mindful meditation on physical healing is simply another example of cross-modal adaptation in perception, much like adaptation to prism-displaced vision. It is argued that psychological interventions produce a conflict between the perceptual modalities of the immune system and vision (or touch), which leads to change in the immune system in order to realign the modalities. It is argued that mind–body interactions do not exist because of higher-order cognitive thoughts or beliefs influencing the body, but instead result from ordinary interactions between lower-level perceptual modalities that function to detect when sensory systems have made an error. The theory helps explain why certain illnesses may be more amenable to mind–body interaction, such as autoimmune conditions in which a sensory system (the immune system) has made an error.

The perception approach put forth here is that observed physical change to psychological interventions is actually just another example of perceptual adaptation, much like spatial adaptation to prism-displaced vision. [11]

A study was done on effectiveness of guided imagery relaxation of pain and on levels of pain and depression in patients diagnosed with fibromyalgiai and Patients diagnosed with fibromyalgia aged 18 to 70 years (n = 60) were randomly assigned to a guided imagery group (n = 30) or a control group (n = 30). The outcomes measures were scores

for pain with the McGill Pain Questionnaire long form (MPQ-LF) and the Visual Analogue Scale (VAS) and depression with the Beck Depression Inventory and the VAS for depression. The effects were examined at baseline, post intervention (4th week), and at the end of the study (8th week). Treatment efficacy was analyzed by using a t test for paired samples. Temporal changes in the scores were examined by using a 2-way repeated-measures analysis of variance. It was concluded that Patients diagnosed with fibromyalgia may benefit from this nursing intervention in terms of relieving pain and depression [(12)]

A study was done on the relationship between mental health and resilience in which 16 correlation studies were examined without time limits, and with a sample size of 3157. Overall, a positive correlation was found between resilience and mental health in the national studies ($r = 0.48$). [(13)]

A study was done on Assessment of Guided Imagery Effect on Reducing Anxiety and Pain Associated with Wound Dressing Changes in Burn Patients. The study was done all burn patients (grade 1 and 2 but not self-immolation) who admitted to the burn department of Imam Reza hospital in Mashhad (the second largest city in Iran) between September 2012 and March 2013. 40 patients selected non-randomly through convenience sampling method were divided randomly into two equal groups of intervention and control. The intervention group received guided imagery treatment (15 minutes per day for 8 days) in addition to the routine care, while the control group only received the routine care. Data were gathered through a demographic form, Beck anxiety inventory, and McGill pain inventory. The data were analyzed by descriptive statistics such as frequency, mean, and standard deviation and inferential statistics such as independent t-test in SPSS software. It was concluded based on the results that guided imagery can reduce the level of anxiety and pain due to dressing change in burn patients.[(14)]

A study was done to see the relationship between pain, pain beliefs and psychological well-being in patients with chronic pain. A

convenience sample method was used in the research. Data were gathered using a Personel Information Form, The Pain Beliefs Questionnaire and Psychological Well-being Scale. Frequency, percentage, mean, standard deviation and correlation analysis were used for data assessment. It was found that there was a statistically significant correlation between pain severity and organic pain beliefs, statistically significant negative correlation between frequency and severity of pain and psychological well-being, and statistically significant relationship between organic pain beliefs and the psychological well-being. On the basis of the results it was concluded that the Organic pain beliefs and pain intensity affect the psychological well-being of the patients with chronic pain. [15]

A study was done on the cardiovascular patients to study the effect of Acceptance commitment theory and guided imagery on the resilience of cardiovascular patients admitted to the rehabilitation centre. The study was a quasi-experimental with pretest-posttest and follow-up with control group. The research sample size was 45. Interventions consisted of 8 sessions of 60 minutes each (ACT group) and 10 sessions of 45 minutes each (GSI group). Data analysis was performed using repeated measurement covariance analysis and Bonferroni test in SPSS V. 22 software. The results showed that acceptance commitment therapy and guided imagery both show increase in resilience among people but the results of the ACT group was more significant concluding that ACT by focusing on psychological flexibility, is more effective than GSI on Resilience. [6]

A systematic literature review was done on Exploring Guided Imagery and Music as a well-being intervention. It was found out that that GIM interventions have a positive effect on the well-being of clients who seek help for various conditions. [16]

In a study aimed to determine the effect of guided imagery on anxiety, muscle pain, and vital signs in patients with COVID-19. 110 patients

with COVID-19 were recruited and randomly assigned to two control and intervention groups. Data were collected using the Spielberger Anxiety Inventory, the McGill Pain Questionnaire, and the Visual Analogue Scale. The intervention group received ten training sessions of guided imagery. The results indicated a significant difference in the mean scores of state ($t = -3.829$, $p < .001$), trait anxiety ($t = -2.946$, $p = .004$), pain quality ($t = -4.223$, $p < .001$), pain intensity ($t = -3.068$, $p = .003$), and heart rate, systolic blood pressure, and oxygen saturation ($p < .001$) between the two groups after the intervention. It was concluded that Guided imagery as a cost-effective method of complementary medicine is recommended to manage anxiety and pain in patients with COVID-19. [(9)]

A research on the effect of guided imagery on the quality and severity of pain and pain related anxiety associated with dressing change in burn patients was conducted by Aghakhani, Faraji, Alinejadgoli, kazemzadeh, 2021 wherein they saw the pre and post effect of guided imagery on the pain and pain related anxiety associated with dressing change in burn patients . They saw this effect by taking a sample of 70 patients (using purposive sampling) and dividing them into 2 groups of one experimental and one control (n=35). Each patient was given 4 sessions of guided imagery sessions using headphones for 4 consecutive days, 1 session per day. The results were evaluated using repeated measures ANOVA and independent T test and the pre and post intervention results came out to be significant ($p < 0.001$) indicating that guided imagery is effective in dealing with quality and severity of pain and pain related anxiety at the time of dressing in burn patients. [(2)]

Thus, the review shows that burn patients experience psychological distress and severe pain and guided imagery has proven to be effective in building resilience and reducing pain.

6.3 AIMS AND OBJECTIVES OF THE STUDY

- To study the effect of guided imagery on the quality and severity of pain associated with dressing change in burn patients.
- To study the effect of guided imagery on resilience in burn patients.

7. MATERIALS AND METHODS

7.1 SOURCE OF DATA

Study will be conducted on the number of patients admitted in the burn ICU and burn ward at Dayanand Medical college and Hospital, Ludhiana from 01.12.2022 to 1.08.2023 divided into two groups of intervention and control from 18 to 60years of age.

7.2 METHOD OF COLLECTION OF DATA

SAMPLE COLLECTION- The study will be conducted on burn patients (Two groups of intervention and control) admitted in Burn ICU and Burn Ward at Dayanand Medical College and Hospital, Ludhiana from 18 to 60years of age from 01.12.2022 to 1.08.2023.

RESEARCH DESIGN- Pre and post design

SAMPLING TYPE- Systematic sampling

INCLUSION CRITERIA

1. Patients having a second/ third or a fourth grade burn injury.
2. Patients with burn percentage ranging from 20%-70%.
3. Adults from age group between 18 to 60 years of either gender.
4. Patients admitted in Burn ICU or Burn Ward at Dayanand Medical College and Hospital, Ludhiana.
5. Patients willing to give informed consent

EXCLUSION CRITERIA

1. Patients with psychiatric illness.
2. Patients with burn percentage ranging from 0-19% and 71%-100%.
2. Unconscious patients.
3. Patients on ventilator support.
4. Severely burned patient requires prompt resuscitation and definitive surgical management to reduce morbidity and mortality.
6. Patients with hearing impairments.

METHODOLOGY

The study will be conducted on burn patients from 18 to 60 years of age, with either second, third or fourth grade burn with burn percentage ranging from 20%-70% admitted in Burn ICU or Burn ward at Dayanand Medical College, Ludhiana undergoing treatment from 01.12.2022 to 1.08.2023. Socio Demographic Proforma will be filled containing the basic information of the subject. They will be evaluated for resilience using Brief Resilience Scale , and for intensity and quality of pain the Visual Analog Scale (VAS), the short-form McGill Pain Questionnaire (SF-MPQ) will be administered. Then in both groups, the level of pain and resilience will be assessed after the dressing change. Each participant will undergo four sessions of Guided imagery .One Guided imagery session will be conducted in one day before the dressing of the patient starts. The duration of the guided imagery sessions will be for 15-20mins each. The Guided imagery sessions will be delivered via individual therapy setting. After completion of the 4 th Guided imagery session, participants will be revaluated for, resilience and intensity of pain.

TOOLS:

1. Socio-Demographic Proforma
2. Visual Analog Scale (VAS)
3. Short-form McGill Pain Questionnaire (SF-MPQ)
4. Brief Resilience Scale

Visual Analog Scale (VAS) - A Visual Analogue Scale (VAS) is one of the pain rating scales used for the first time in 1921 by Hayes and Patterson It is often used in epidemiologic and clinical research to measure the intensity or frequency of various symptoms The most simple VAS is a straight horizontal line of fixed length, usually 100 mm. The ends are defined as the extreme limits of the parameter to be measured (symptom, pain, health) orientated from the left (worst) to the right (best). In some studies, horizontal scales are orientated from right to left, and many investigators use vertical VAS. Using a

ruler, the score is determined by measuring the distance (mm) on the 10-cm line between the “no pain” anchor and the patient’s mark, providing a range of scores from 0–100. A higher score indicates greater pain intensity. Based on the distribution of pain VAS scores in post-surgical patients (knee replacement, hysterectomy, or laparoscopic myomectomy who described their postoperative pain intensity as none, mild, moderate, or severe, the following cut points on the pain VAS have been recommended: no pain (0–4 mm), mild pain(5-44 mm), moderate pain (45–74 mm), and severe pain (75–100 mm). Reliability of the VAS for acute pain measurement as assessed by the ICC appears to be high. Ninety percent of the pain ratings were reproducible within 9 mm. construct validity, in patients with a variety of rheumatic diseases, the pain VAS has been shown to be highly correlated with a 5-point verbal descriptive scale (“nil,” “mild,” “moderate,” “severe,” and “very severe”) and a numeric rating scale (with response options from “no pain” to “unbearable pain”), with correlations ranging from 0.71–0.78 and 0.62–0.91, respectively). The correlation between vertical and horizontal orientations of the VAS is 0.99. [17,18]

Short-form McGill Pain Questionnaire (SF-MPQ)- The Short-form McGill Pain Questionnaire (SFMPQ) was developed to provide an instrument that could be completed in less time than the MPQ but would still reflect both the sensory and affective dimensions of pain (Melzack 1987). The SFMPQ consists of 15 descriptors from the MPQ . Of the 15 descriptors, 11 are from the sensory section of the MPQ and 4 are from the affective section. Each descriptor is ranked on an intensity scale of 0 = none, 1 = mild, 2 = moderate and 3 = severe. A VAS and a 0–5 numerical rating scale are also included. Scoring is by adding the rankings for the descriptors although sensory and affective descriptors may be scored separately. "Pain Rating Index - scale value (VAS)"- the assigned rating can also be accepted as the score for the pain descriptor. Number of words chosen (NWC)"- The higher the total score on the MPQ, the more the pain

experience for the patient increases. For the internal consistency reliability, a Cronbach's alpha of r>0.75 has been reported. One can conclude that the SF-MPQ is a highly valid instrument to evaluate pain in patients with and without neuropathic etiology. [19]

Brief resilience Scale- is a measure of resilience [29]. It consists of six statements for individuals to agree or disagree with. Items 1, 3, and 5 are positively worded, and items 2, 4, and 6 are negatively worded. The BRS is scored by reverse coding items 2, 4, and 6 and finding the mean of the six items. Scores of 1.00 - 2.99 indicate low resilience, 3.00 - 4.30 indicate normal resilience, 4. 31 - 5.00 indicate high resilience. The scale has good internal consistency, with Cronbach's alpha ranging from .80–.9. It gave a test-retest reliability (ICC) of .69 for one month in 48 participants from Sample 2 and .62 for three months in 61 participants from Sample 3. It was positively correlated with the resilience measures, optimism, and purpose in life, and negatively correlated with pessimism and alexithymia. It was negatively related to perceived stress, anxiety, depression, negative affect, and physical symptoms.[20]

OUTCOME

In this study the post intervention evaluation will be done and it will be compared with the baseline evaluation. The findings of the present study would add to enrich the existing fund of knowledge. This will have direct and practical implications for pain management in burn patients.

STATISTICAL ANALYSIS

Data will be described in terms of range; mean ±standard deviation (± SD), median, frequencies (number of cases) and relative frequencies (percentages) as appropriate. To determine whether the data is normally distributed, a Kolmogorov-Smirnov test will be used. Comparison of quantitative variables between the study groups will be done using Student t-test and Mann Whitney U test for independent samples for parametric and non-parametric data respectively. For

comparing categorical data, Chi square ($\chi 2$) test will be performed and fisher exact test was used when the expected frequency is less than 5. A probability value (p value) less than 0.05 will be considered statistically significant. All statistical calculations will be done using (Statistical Package for the Social Science) SPSS 21version (SPSS Inc., Chicago, IL, USA) statistical program for Microsoft Windows.

7.3 DOES THE STUDY REQUIRE ANY INVESTIGATIONS OR INTERVENTIONS TO BE CONDUCTED ON PATIENTS OR OTHER HUMANS OR ANIMALS? IF SO, PLEASE DESCRIBE BRIEFLY.

No

7.4 HAS ETHICAL CLEARANCE BEEN OBTAINED FROM YOUR INSTITUTION IN CASE OF 7.3?

Yes, attached herewith

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SOCIO-DEMOGRAPHIC PROFORMA

S.NO: - **Date:**

1. NAME:

2. AGE:

3. SEX: - Male/ Female

4. MRD.NO: -

5. Education-

a) Illiterate b) Up to Matric
c) 10th d) 12th e) Graduate f) Post graduate

6. Occupation-

a) Farmer/Clerical/Shopkeeper b) Semi-skilled/skilled worker
c) Unemployed d) Other
e) Professional f) Student

7. Address- a) Urban b) Rural

8. Contact no.-

9. Family Type- a) Nuclear b) Joint

10. Education of the Head of family

A) Professional degree
B) Graduate or post graduate
C) Intermediate or post high school diploma
D) High school certificate
E) Middle school certificate
F) Primary school certificate
G) Illiterate

11. Occupation of the head of family

A) Professional
B) Semi- professional
C) Clerical, shop owner/farm
D) Semi-skilled worker
E) Unskilled worker
F) Unemployed

12. Monthly income of the family

A) >52,734
B) 26,335-52,733
C) 19,759-26,354
D) 13,161- 19,758
E)
F) 7,887-13,160
G) 2,641-7,886
H) <2,640

Signature of candidate **Signature of supervisor**

13. Socio economic status

A) Upper
B) Upper middle
C) Lower middle
D) Upper lower
E) Lower

14. Diagnosis:

15. Time since diagnosis:

16. Grade of burn-

1. Grade 2
2. Grade 3
3. Grade 4

17. Percentage of burn-

18. Cause of the burn injury-

19. PHARMCOLOGICAL TREATMENT HISTORY-

20.PSYCHOTHERAPEUTIC INTERVENTION:

	McGill Pain Questionnaire			**Visual Analog Scale**	**Brief Resilience Scale**
	Sensory score	**Affective Score**	**Total score**	**Total score**	**Total score**
Pre intervention scores					
Session 1					
Session 2					
Session 3					
Session 4					
Post Intervention scores					

Signature of candidate **Signature of supervisor**

CONTACT NO.

Signature of candidate **Signature of supervisor**

INFORMED PATIENT CONSENT

Date: _____

I……..D/o, W/o, S/o…….. ……am willing to participate in the study "**TO STUDY EFFECT OF GUIDED IMAGERY ON THE QUALITY AND SEVERITY OF PAIN ASSOCIATED WITH DRESSING CHANGE AND RESILIENCE IN BURN PATIENTS**" The procedure with its complications has been explained to me in local vernacular language. I have fully understood that no special tests and extra expenditure in any form, merely for the purpose of dissertation is being carried out. I am free to opt out the study any time without assigning any reason.

……. ……

Signature of the Witness Signature of the patient

Name:

Signature of Candidate **Signature of Supervisor**

<u>मंमरीज अनुमति फा</u>

तिथि_____

मैं_____ पत्नी/पुत्र/ पुत्री_____
निवासी_____

इस शोधकार्य "**TO STUDY EFFECT OF GUIDED IMAGERY ON THE QUALITY AND SEVERITY OF PAIN ASSOCIATED WITH DRESSING CHANGE AND RESILIENCE IN BURN PATIENTS**"में भाग लेने के लिए लिए अपनी स्वेच्छा से तैयार हूँ। सहमत हूँ। मैं इस शोधकार्य में भाग लेने के करतामैं पुष्टि/करती हूँ की यह स्वीकृति देने के लिए मुझे कोई आर्थिक प्रलोभन नहीं दिया गया और न ही दबाव डाला गया है। मुझे इस शोधकार्य स है की यह विज्ञान कर दिया गया है और मुझे यह विश्वाश्य स्पष्टका उद्दे भ के लिए है। मुझे इस शोधकार्य में होने वाले जोखिम के और मानवता के ला बारे में समझा दिया गया है और मेरी समझ में यह जोखिम बहुत मामुली है।

मैं इस शोधकार्य में भाग लेने के सम्बन्ध में किसी भी समय अपनी कर सकताअस्वीकृति व्यक्त/ करने का सकती हूँ और मेरे अस्वीकृति व्यक्त इलाज पर कोई प्रभाव नहीं पड़ेगा। मेरे

_____ _____

गवाह के हस्ताक्षर रोगी के हस्ताक्षर/ अंगूठे का निशान

नाम: नाम:

_____

अन्वेषक केहस्ताक्षर

_____

विद्यार्थी के हस्ताक्षर

ਮਰੀਜ਼ ਰਜ਼ਾਮੰਦੀ ਫਾਰਮ

ਮਿਤੀ_____

ਮੈ_____ਪਤਨੀ/ਪੁੱਤਰ/ਪੁੱਤਰੀ_____

ਵਾਸੀ_____ _____

“TO STUDY EFFECT OF GUIDED IMAGERY ON THE QUALITY AND SEVERITY OF PAIN ASSOCIATED WITH DRESSING CHANGE AND RESILIENCE IN BURN PATIENTS” ਤੇ ਚਲ ਰਹੀ ਖੋਜ ਵਿਚ ਹਿੱਸਾ ਲੈਣ ਲਈ ਰਜ਼ਾਮੰਦ ਹਾਂ ।ਇਸ ਖੋਜ ਕੰਮ ਵਿਚ ਹਿੱਸਾ ਲੈਣ ਲਈ ਮੈ ਆਪਣੀ ਮਰਜ਼ੀ ਨਾਲ ਤਿਆਰ ਹਾਂ । ਮੈ ਇਹ ਦਸਣਾ ਚਾਹੁੰਦਾ ਹਾਂ/ ਚਾਹੁੰਦੀ ਹਾਂ ਕੇ ਇਹ ਰਜ਼ਾਮੰਦੀ ਦੇਣ ਵਾਸਤੇ ਮੈਨੂ ਕਿਸੇ ਵੀ ਤਰਾਂ ਦਾ ਲੋਭ-ਲਾਲਚ ਨਹੀ ਦਿੱਤਾ ਗਿਆ ਅਤੇ ਨਾ ਹੀ ਕੋਈ ਦਬਾ ਪਾਇਆ ਗਿਆ ਹੈ। ਮੈਨੂ ਇਸ ਖੋਜ ਦਾ ਮਨੋਰਥ ਸਮਝਾ ਦਿੱਤਾ ਗਿਆ ਹੈ ਅਤੇ ਮੈਨੂ ਇਹ ਭਰੋਸਾ ਦਵਾਇਆ ਗਿਆ ਹੈ ਕੇ ਇਹ ਖੋਜ ਵਿਗਿਆਨ ਅਤੇ ਮਾਨਵਤਾ ਦੀ ਭਲਾਈ ਲਈ ਹੈ ।ਮੈਨੂ ਇਸ ਖੋਜ ਵਿਚ ਹੋਣ ਵਾਲੇ ਖਤਰੇ ਬਾਰੇ ਸਮਝਾ ਦਿੱਤਾ ਗਿਆ ਹੈ ਅਤੇ ਮੈਨੂ ਇਹ ਯਕੀਨ ਹੈ ਕੇ ਇਹ ਖਤਰਾ ਬਹੁਤ ਮਾਮੂਲੀ ਹੈ ।ਮੈਨੂ ਇਸ ਖੋਜ ਕੰਮ ਵਿਚ ਹਿੱਸਾ ਲੈਣ ਦਾ ਢੰਗ – ਤਰੀਕਾ ਸਮਝਾ ਦਿੱਤਾ ਗਿਆ ਹੈ।

ਮੈ ਇਸ ਖੋਜ ਕੰਮ ਵਿਚ ਹਿੱਸਾ ਲੈਣ ਬਾਰੇ ਆਪਣੀ ਰਜ਼ਾਮੰਦੀ ਕਿਸੇ ਵੀ ਸਮੇ ਵਾਪਸ ਲੈ ਸਕਦਾ ਹਾਂ/ ਸਕਦੀ ਹਾਂ ਅਤੇ ਮੇਰੀ ਰਜ਼ਾਮੰਦੀ ਵਾਪਸ ਲੈਣ ਦਾ ਮੇਰੇ ਇਲਾਜ ਤੇ ਕੋਈ ਅਸਰ ਨਹੀ ਹੋਵੇਗਾ।

_____ _____

ਗਵਾਹ ਦੇ ਹਸਤਾਖਰ ਮਰੀਜ਼ ਦੇ ਹਸਤਾਖਰ

ਮਿਤੀ_____ _____ਮਿਤੀ

ਪਤਾ _____ ਪਤਾ_____

_____

ਨਿਰੀਖਕ ਦੇ ਹਸਤਾਖਰ

_____

ਸਿਖਿਆਰਥੀ ਦੇ ਹਸਤਾਖਰ

SHORT-FORM McGILL PAIN QUESTIONNAIRE

RONALD MELZACK

PATIENT'S NAME: _____ DATE: _____

	NONE	MILD	MODERATE	SEVERE
THROBBING	0) _____	1) _____	2) _____	3) _____
SHOOTING	0) _____	1) _____	2) _____	3) _____
STABBING	0) _____	1) _____	2) _____	3) _____
SHARP	0) _____	1) _____	2) _____	3) _____
CRAMPING	0) _____	1) _____	2) _____	3) _____
GNAWING	0) _____	1) _____	2) _____	3) _____
HOT-BURNING	0) _____	1) _____	2) _____	3) _____
ACHING	0) _____	1) _____	2) _____	3) _____
HEAVY	0) _____	1) _____	2) _____	3) _____
TENDER	0) _____	1) _____	2) _____	3) _____
SPLITTING	0) _____	1) _____	2) _____	3) _____
TIRING-EXHAUSTING	0) _____	1) _____	2) _____	3) _____
SICKENING	0) _____	1) _____	2) _____	3) _____
FEARFUL	0) _____	1) _____	2) _____	3) _____
PUNISHING-CRUEL	0) _____	1) _____	2) _____	3) _____

NO PAIN ——— WORST POSSIBLE PAIN

P P I

0	NO PAIN	_____
1	MILD	_____
2	DISCOMFORTING	_____
3	DISTRESSING	_____
4	HORRIBLE	_____
5	EXCRUCIATING	_____

THE OHIO STATE UNIVERSITY

Brief Resilience Scale (BRS)

Please respond to each item by marking <u>one box per row</u>		Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
BRS 1	I tend to bounce back quickly after hard times	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
BRS 2	I have a hard time making it through stressful events.	☐ 5	☐ 4	☐ 3	☐ 2	☐ 1
BRS 3	It does not take me long to recover from a stressful event.	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
BRS 4	It is hard for me to snap back when something bad happens.	☐ 5	☐ 4	☐ 3	☐ 2	☐ 1
BRS 5	I usually come through difficult times with little trouble.	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
BRS 6	I tend to take a long time to get over set-backs in my life.	☐ 5	☐ 4	☐ 3	☐ 2	☐ 1

Scoring: Add the responses varying from 1-5 for all six items giving a range from 6-30. Divide the total sum by the total number of questions answered.

My score: _____ item average / 6

Smith, B. W., Dalen, J., Wiggins, K., Tooley, E., Christopher, P., & Bernard, J. (2008). The brief resilience scale: assessing the ability to bounce back. *International journal of behavioral medicine*, *15*(3), 194-200.

GUIDED IMAGERY SCRIPT

Relax for a few minutes. Take off your shoes, put on comfortable clothes, close your eyes, and take a few deep breaths. Imagine walking down a staircase. In each step, pay attention to the feeling that makes you more and more relaxed. When you are completely relaxed, visualize a favorite scene... When you feel comfortable in your desired scene, gradually turn your mind to the problem you want to solve. If multiple images come to your mind, choose one of them to consider in the current session. If no image comes to your mind, try turning to another sense... Imagine that your problem will be completely resolved at the end of the session. This creates the initial healing plan inside you. At the end of the session, take a few more deep breaths and imagine yourself climbing an imaginary staircase while gradually becoming aware of the environment, open your eyes stretch your body, smile, and carry on your routine activities.